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Electrical Contracting

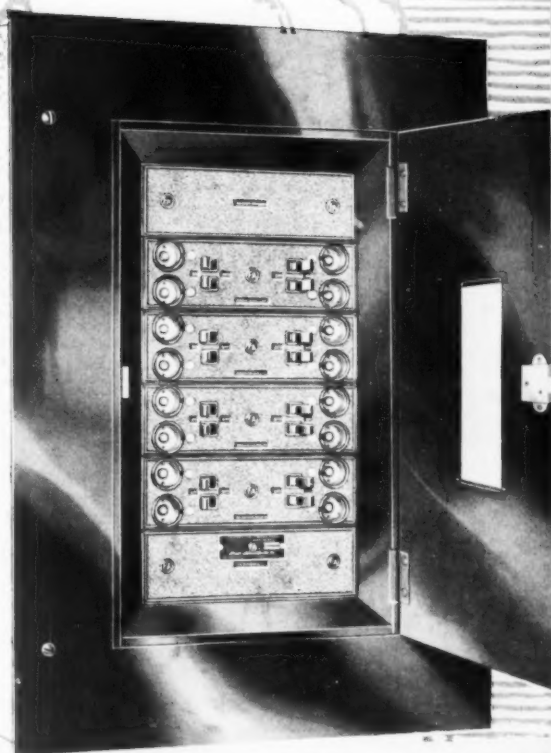
December 1930

With Which Is Incorporated
The Electragist

*There can
be no failure!*

Panelboards must
function constantly,
without maintenance.

ⓕA Panelboards do.
Likewise ⓕA Service
can be depended
upon always to help
you to safe and cer-
tain success.



DEPEND ON EVERY PART

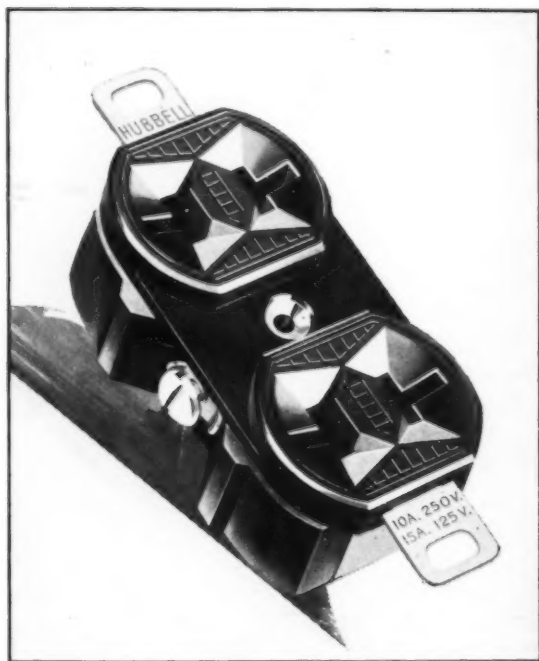


Frank Adam
ELECTRIC COMPANY
ST. LOUIS
OFFICES IN ALL PRINCIPAL CITIES

Panelboards are the Sign of a Better Job

Plug In with your Eyes Shut..

SURELY AND ACCURATELY the
unique Slot-Finder guides blades
into the new Hubbell Outlet...



MAKE the test right at your desk. In one hand take a new Hubbell Convenience Outlet... in the other an attachment plug cap. Then just press the cap anywhere against the face of the outlet... Into the slots go the blades! No groping. Quickly, surely, accurately, the unique Slot-Finder perfected by Hubbell guides blades into slots.

The Slot-Finder is just one of the superior features incorporated in the new Hubbell Outlet. Another of equal worth is the moisture-proof solid composition base. Decided advances in design are also shown in the better wiring and insulating facilities; the mounting strap which is rigidly locked to the outlet face; and the modernistic Bakelite face.

This new outlet is an improvement worthy in every way of the inventors of the first slot outlet and the first Te-Slot outlet. Inspect it and you will recommend it for future wiring jobs. Single and Duplex types.

HARVEY HUBBELL, INC., BRIDGEPORT, CONN.

HUBBELL
convenience



OUTLETS

Electrical Contracting

With Which Is Incorporated The Electricist

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Eastern Field Editor

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Western Field Editor

Vol. 30

DECEMBER, 1930

No. 2

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RESALE PRICE NEWS

Prices have been further reduced on a number of items during the past month. Price reductions are noted in:

Porcelain clamp bushings
Threaded composition bushings
Bells and buzzers
Push buttons
Rubber cord
Hangers
Solder.

Some sizes of new code R.C. wire, larger sizes of D.B. stranded, circular mil cable, weather-proof wire, annunciator wire, office or damp-proof wire and Deltabeston.

Adjustments in prices have been made on fittings for armored cable, knobs, tubes, cleats, and Noark switches.

Listings of Ansonia annunciators have been increased to cover wood and metal types. Minor changes have been made in P & W listings.

Extension arms for pull sockets and commercial glassware have been added to the listings.

Benjamin-Starrett has been added to the panelboard or fuse cabinet listing. Changes in set-up have been made on A.S.E. fuse cabinets.

A new set-up has been made on Noark switches and telephone wires.

The 100 amp. type outdoor meter service switches have been added.

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5

NON-METALLIC FLEXIBLE TUBING



U. S. Patent No. 1,111,806—Sept. 29, 1924
Canadian Patent No. 280,224—May 1, 1928

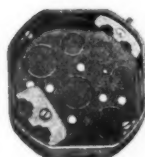
FLEXTUBE



Cat. No. 2829-L2
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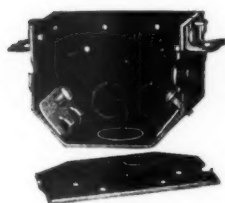
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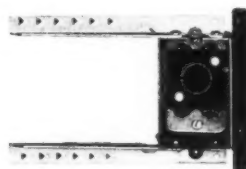
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3 1/4" Octagon x 1 1/2" Deep



Cat. No. 4
2 1/4" Deep



Cat. No. 4XL
2 1/4" Deep with Extended Ears
and Lath Support

and

F
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FOR
EVERY

*Conceivable
Requirement*

National Electric Products Corporation
National Metal Molding Division
Pittsburgh, Pa.

CONDUIT

NEPCODUCT

OVALDUCT

BONDNUTS &
BUSHINGS

OUTLET
BOXES

ARMORED
CABLE

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BOXES

BAR
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SWITCH
BOXES

OVAL ARMORED
CABLE

FLEXIBLE-METALLIC
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METAL
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DEVICES

NON-METALLIC
FLEXIBLE TUBING

NON-METALLIC
SHEATHED CABLE

WIRES &
CABLES

FLEXIBLE
LAMP CORDS

PORTABLE
CORDS

FLEXLAY
DITCH CABL

PARKWAY
CABLE

BRACKETS &
WIREHOLDERS



No one ever heard of a "nail short" in RomeX

Nails pass through RomeX easily but its construction makes a "nail short" practically impossible.

No one ever heard of a case of RomeX being "shorted" in this way. And as for "nail grounds," with the non-metallic sheath of RomeX, they simply can't happen. . . . These are safety features inherent in RomeX structure.

There are no "come-backs" with RomeX. Once in, the installer is never called back—except as more RomeX outlets are needed.

Give RomeX a real trial. Feel its lighter weight and greater flexibility. Know its easier handling. No special fittings are needed.

RomeX fits into these days of extension wiring like no other material.

GENERAL CABLE CORPORATION

EXECUTIVE OFFICES: 420 LEXINGTON AVENUE, NEW YORK • OFFICES IN PRINCIPAL CITIES



In 1931

IN 1931 a certain number of people will get married and need a place to live; a certain number of families will need larger quarters; fires will cause a certain number of buildings to be rebuilt, etc., etc.—the regular run of rain or shine business.

In 1931 the savings banks will be faced with the dilemma of either discouraging increased savings or else finding a market for money. If savings are discouraged then greater spending must take place on the part of the public. If the banks find safe ways to place money, then it means spending by the borrower—no matter how you look at it, more spending.

In 1931 the life insurance companies must find larger outlets for their capital, or else cut dividends. Being so very proud of their dividend record and being one of the largest buyers of building mortgages, their action must necessarily stimulate construction.

In 1931 whatever stocks had been carried over from boom periods will have been completely depleted and people will be forced to buy from sheer necessity.

• • •

IN 1931 the suits, shoes, hats, automobiles, etc., etc., that were forced to last an extra year will finally wear out and have to be replaced.

In 1931 the inevitable increase in business due to the above causes will

increase employment, thereby releasing an additional spending power.

This 1931 business is for sale. Who wants it? It will not be given away—the person who wants it must be willing to pay the price—and the price is hard work, intensive market development, planned selling.

ELECTRICAL CONTRACTING has made its plans to help those contractors and manufacturers who have forgotten the depression and have their eyes fixed on getting their share, or more, of the 1931 business.

In 1930 the need was for economy—a thorough housecleaning of all those business extravagances which always seem to creep in during boom periods. In most organizations the housecleaning has been well done.

• • •

IN 1931 the dominant need will be sales courage. The business will go only to those who go after it in a determined manner.

Those companies which continue the policy of retrenchment even to sales will find it difficult to hold even the little they have.

Have you the will to work? Have you the courage to spend time and money to get more business?

To those who have the will and courage ELECTRICAL CONTRACTING offers its assistance and promises prosperity in 1931.

THE
ANACONDA
TRADE MARK
APPEARS ON **ANACONDA**
THESE
from mine to consumer



6 WIRING PRODUCTS

ANACONDA
Rubber-Covered Wire
ANACONDA
ABC Armored Cable
ANACONDA
Flexible Steel Conduit
ANACONDA
Duraduct Loom
ANACONDA
Durax Sheathed Cable
ANACONDA
Flexible Cords

Anaconda stands for many wiring products that you use in your work every day. Just study the list at the left. Time-savers, everyone!

These Anaconda Wiring Products are made in two of our twelve mills—in our Pawtucket, Rhode Island mill and in our fine, *new* mill at Marion, Indiana. New machinery, improved equipment and modern methods make them as good as any on the market and better than most. They are quality materials, easy to handle and easy to install. They *speed up wiring jobs!*

Ask your jobber for wiring products that bear the Anaconda name and trade mark.

ANACONDA WIRE & CABLE COMPANY

GENERAL OFFICES: 25 BROADWAY, NEW YORK
CHICAGO OFFICE: 20 NORTH WACKER DRIVE

Sales Offices in Principal Cities

DECEMBER, 1930

JOHN WISE *refuses to GET CAUGHT Twice in the Same Place*

"WHAT you buying, John?—red ink to keep books with?" asked Henry Trimmer when he met John Wise, the town's most prosperous electrical contractor, in the stationery store.

"No, Henry, I'm here to buy a record book so I can start a 'comparison office'."

"A what-kind-of-an office?"

"A comparison office. You see," exclaimed Wise, "all the big department stores have what they call a comparison office. Originally this was a gang of gum-shoe workers who snooped around among competitive stores, pricing and sampling and trying to find out who was underselling 'em. When a store sold something cheaper, why, they cut their price."

"Well, steal my gold-plated pliers!" exclaimed Henry Trimmer. "Ain't we got enough price cutting in this business already, but you must go gum-shoeing for more?"

"You didn't let me finish," replied John.

"You see," he continued, "that's the way a comparison office *used* to operate. But now-a-days they keep an eye on prices, of course, but they also find out what their competitors offer in the way of service and value that's better than what they offer—they find out why it is that people will pay more for the same article in some other store and *like* it.

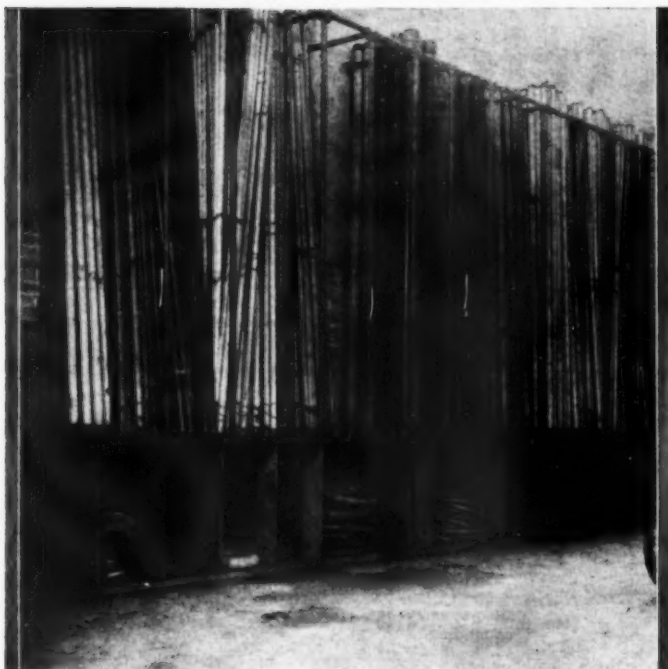
"Now, here's the *idea*," concluded John Wise as they started to leave. "On each page of this book I will place the name of a competitor. When that competitor gets a job



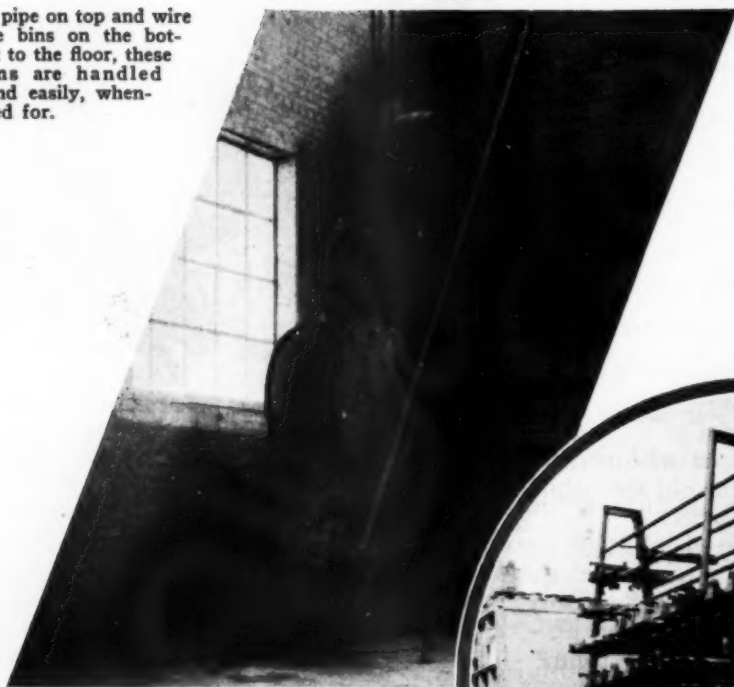
away from me I'll find out why. Maybe it's better salesmanship, better advertising, better engineering. Maybe it's price or friendship or prestige or because he uses trademarked materials or has stronger bank connections or club affiliation, or because his men are neater and don't clutter up an acre of floor to hang a drop-light or they install switch-plates square instead of on the bias. Whatever the reason is, I'm going to find it out and write it down in this 'comparison book' of mine. Then I'll make it my business to see you don't beat me again the same way."

"Ain't that a lot of trouble?" suggested Henry Trimmer.

"All business is a lot of trouble," replied John Wise, "but I notice that those who have the least business have the most trouble—because they don't take enough trouble to get enough business."



With the pipe on top and wire and cable bins on the bottom, next to the floor, these two items are handled swiftly and easily, whenever called for.



Heavy cables can be taken from these suspended reels in various lengths and loaded right on the truck which backs into a doorway to the left of the window.

Hangers are quickly and easily selected from these racks whenever they are needed.



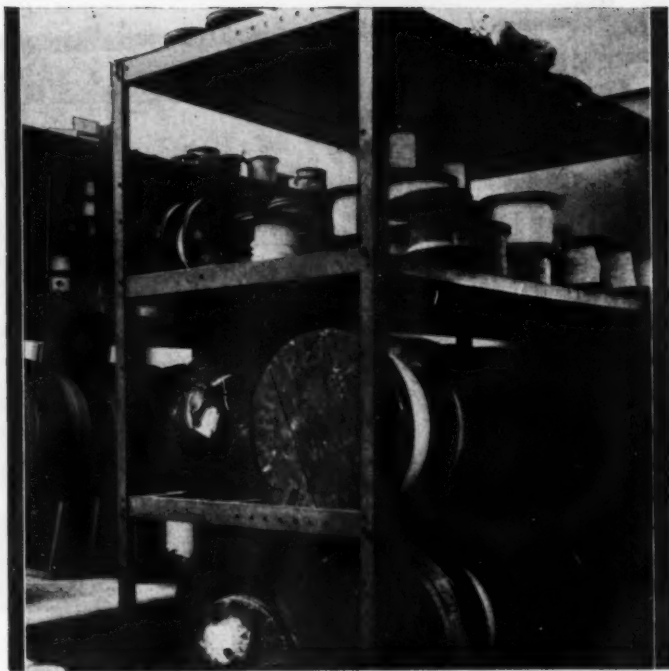
Good HOUSE-K

Neatness, cleanliness and the orderly arrangement of stock and equipment plays an important part in the service an electrical contractor gives. In

this shop all apparatus and material from the smallest bolt to large transformers and motors are available at all times. The result is the elimination of a large percentage of the usual lost motion.

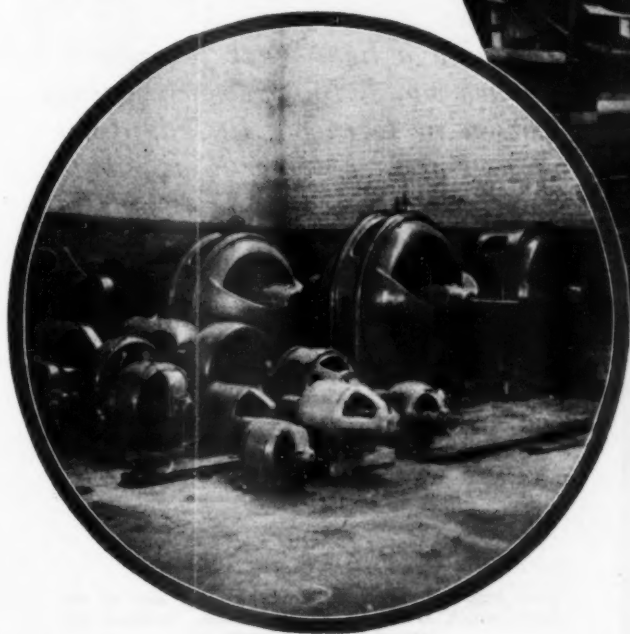
By THOMAS KRAMER
Shelby Electric Co., Memphis, Tenn.

E-KEEPING *Pays* Dividends

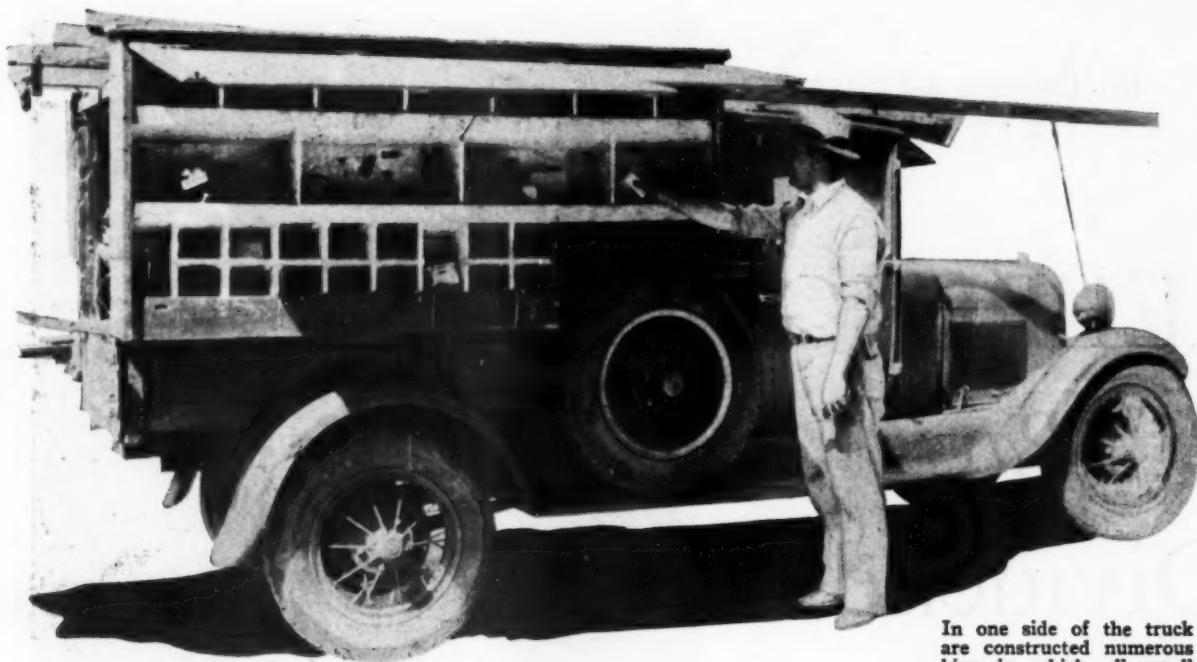


The magnet wire stock is necessarily large as a quantity of motor work is handled. Properly constructed racks keep every size easily accessible.

Large elbows placed in special racks, are much easier to get out in filling orders. There is no diving into bins or miscellaneous piles and no skinned knuckles from elbows slipping around. The stock on hand can be seen at a glance.



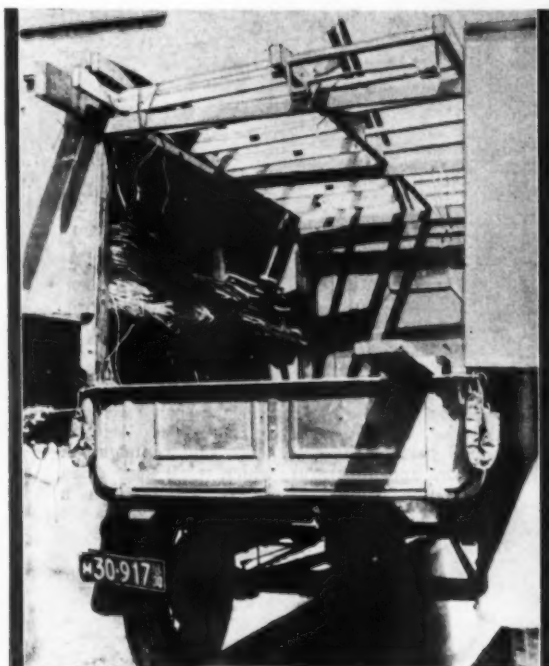
A small part of the emergency and rental stock of motors and apparatus, which is all kept clean and freshly painted ready to go out on a moment's notice.



In one side of the truck are constructed numerous bins in which all small material is carried. As the truck serves as a small stock-room on the job, everything can be easily obtained when wanted.

A TRUCK

for every JOB



By using a light truck exclusively on each job, J. Buck, electrical contractor in Chicago, Ill., does not require a truck-driver to distribute materials and men, and is able to utilize many labor-saving devices on small jobs, such as service station wiring in which he specializes

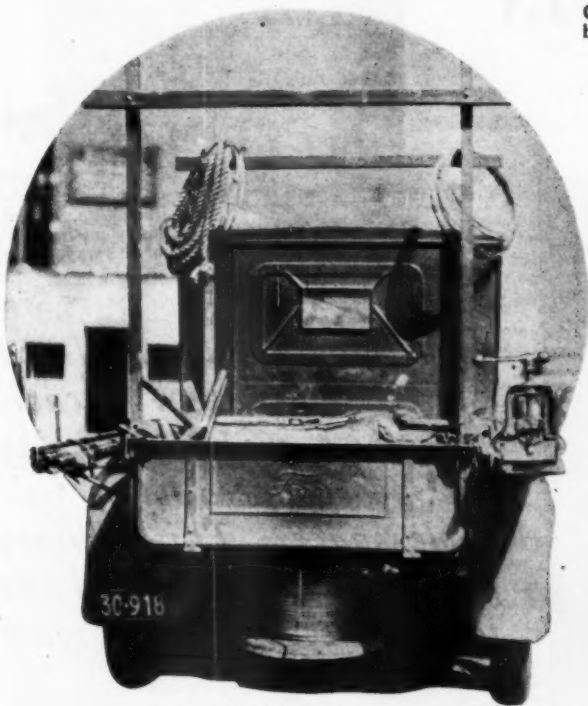


Wire bins are constructed on the other side of the truck which are open on the inside. Ladders are carried on a rack overhead.

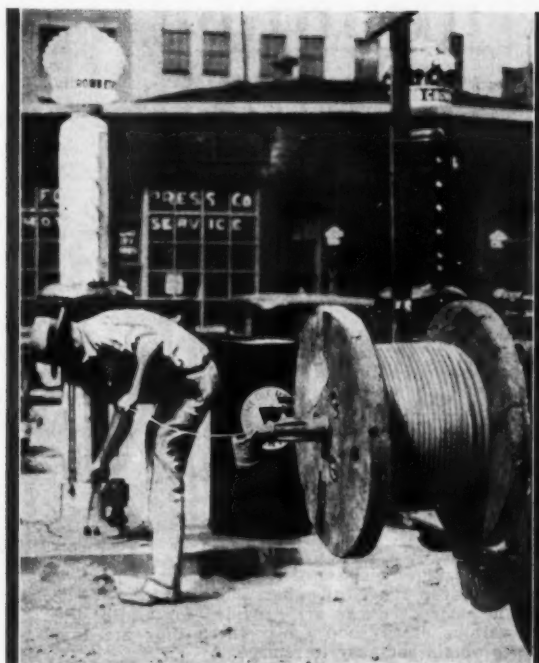
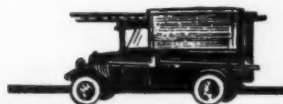
Electrical Contracting, December, 1930



On the left-hand side of the truck, below the wire bins, is a conduit rack capable of carrying enough conduit for the average small job.



On very small jobs light delivery trucks are used. All trucks are fitted with cable reel carriers constructed of angle iron into which the reel may be easily slipped. When ordering reels of cable for these carriers care must be taken to specify bolted reels.

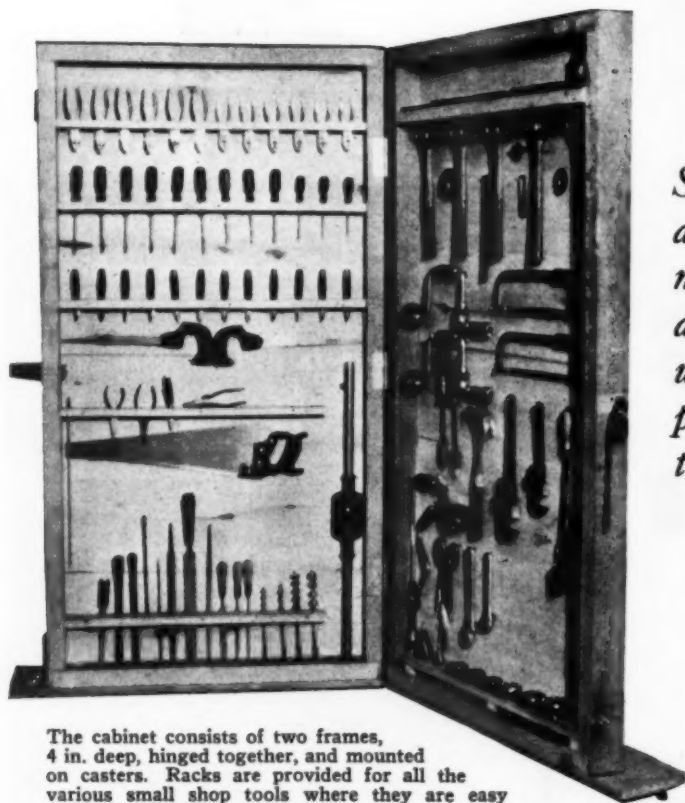


Lead covered cable, which must be handled carefully, may be easily removed from the reel by supporting the reel on a hickey clamped in a pipe vise on the truck.

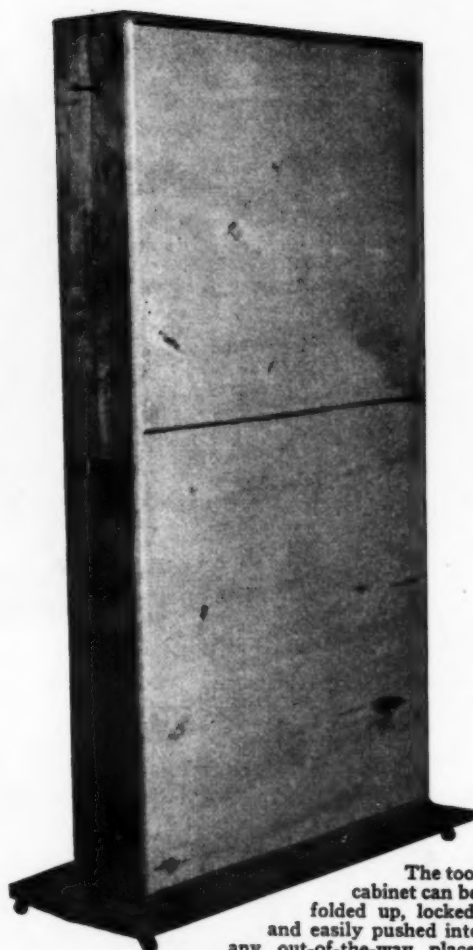
COMPACT CABINET

for

Shop Tools



The cabinet consists of two frames, 4 in. deep, hinged together, and mounted on casters. Racks are provided for all the various small shop tools where they are easy to obtain and easy to replace.



The tool cabinet can be folded up, locked, and easily pushed into any out-of-the-way place.

Shop tools are easily misplaced and lost unless kept in cabinets which are usually bulky and monopolize a lot of valuable space. This cabinet provides a place for all the tools, yet occupies little space



Reinspection

Is Provided For in Half of the City Ordinances

This is the last of three articles on the status of reinspection, based on a survey of 150 cities in 38 states made by Electrical Contracting. The previous articles revealed that in 6 out of every 10 buildings reinspected there are \$59.00 wiring jobs and that 3 out of 10 cities enforce reinspection

FIFTY-SIX per cent of the cities provide for reinspection in their electrical ordinances according to a survey made by ELECTRICAL CONTRACTING showing the status of reinspection in 150 cities in 38 states. No reinspection is provided for in 44 per cent of the ordinances.

Of the 56 per cent providing for reinspection,

The Status of Reinspection

The Situation:

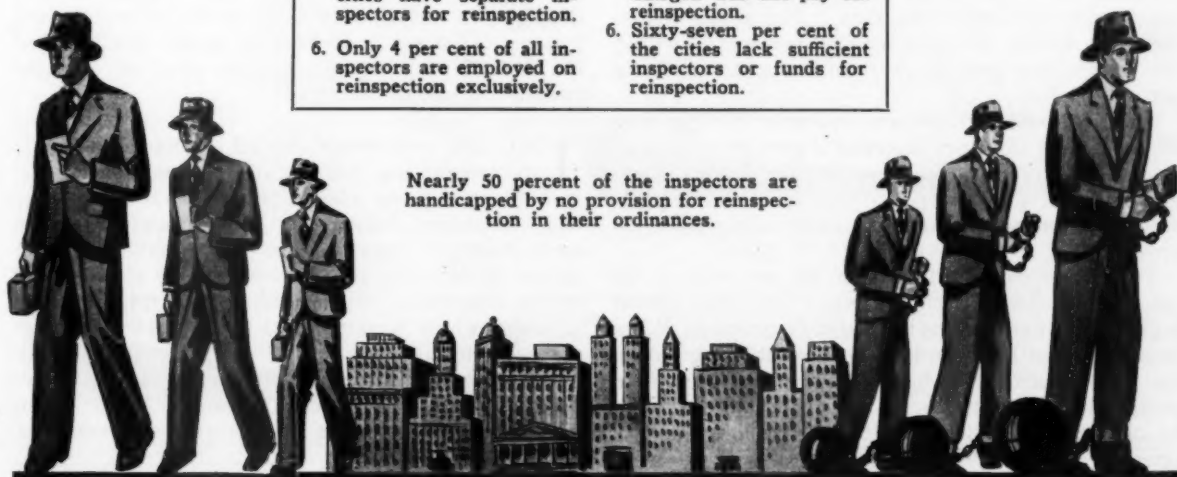
1. Thirty-one per cent of the cities are doing a quantity of reinspection.
2. Fifty-three per cent have some form of reinspection but give it practically no attention.
3. Sixteen per cent have no reinspection whatever.
4. Only 11 per cent of the cities claim that nothing is holding up reinspection.
5. Only 14 per cent of the cities have separate inspectors for reinspection.
6. Only 4 per cent of all inspectors are employed on reinspection exclusively.

Why:

1. Only 56 per cent of the cities provide for reinspection in their ordinances.
2. Only 41 per cent of the cities providing for reinspection make it mandatory.
3. Only 30 per cent of the ordinances state how often reinspection should be made.
4. Thirty-four per cent of the cities give their inspectors no police power.
5. Sixty-nine per cent of the cities claim that the fees charged will not pay for reinspection.
6. Sixty-seven per cent of the cities lack sufficient inspectors or funds for reinspection.

tion, only 41 per cent make it mandatory and the other 59 per cent leave it entirely to the option of the inspection department. Also, of these ordinances providing for reinspection, 70 per cent fail to state how often reinspection shall be made. The period of time between reinspections allowed in the other 30 per cent varies from six months to two

Nearly 50 percent of the inspectors are handicapped by no provision for reinspection in their ordinances.





Four out of 6 inspectors are clothed with police power. Thirty-four percent of the inspection departments are operating without this authority.

years. Some of these included in the 30 per cent prescribe the frequency of reinspection only on business districts, theatres, etc.

Provision for reinspection in the electrical ordinance is weakest in the eastern and strongest in the western cities surveyed.

In New England 70 per cent of the cities reporting make no provision for reinspection while 30 per cent have some form of a reinspection program. The south-eastern states have even less reinspection for 73 per cent of the ordinances received show no provision whatever for reinspection.

The middle Atlantic states are considerably stronger in which 60 per cent of the cities reporting provide for reinspection in their ordinances. The north central states are almost the same with 62 per cent providing for reinspection and 38 per cent make no provision for reinspection.

The south central states are somewhat stronger with 70 per cent of the cities reporting a provision for reinspection. However, the Mountain and Pacific states lead the country with 80 per cent of the ordinances providing for reinspection and only 20 per cent making no provision.

The inspection departments of 66 per cent of the cities are clothed in police power. No police power is given 34 per cent of the inspection departments. Police power is given in a number of different ways, among the most common of which is giving the inspector a police commission and badge, and giving him the right, by ordinance, to enter private property and to make arrests. Some inspection departments have to work

through the fire marshal in enforcing reinspection while others have the power to remove the service if reinspection is refused. Some must prefer charges and wait for court action frequently causing considerable delay in enforcing reinspection.

The time given the property owner to correct a condition reported by an inspector as unsafe is left to the option of the inspector in 52 per cent of the cities. In 48 per cent of the cities the time for correction is definitely stated in the ordinance. The time allowed varies from 1 to 60 days and averages 12 days. A large number of the ordinances allow 10 days for correction of unsafe conditions.

Ninety per cent of the inspection departments have the right, by ordinance, to shut off the current from a building or circuit in which a dangerous condition exists and 96 per cent can maintain shut off once the current has been disconnected.

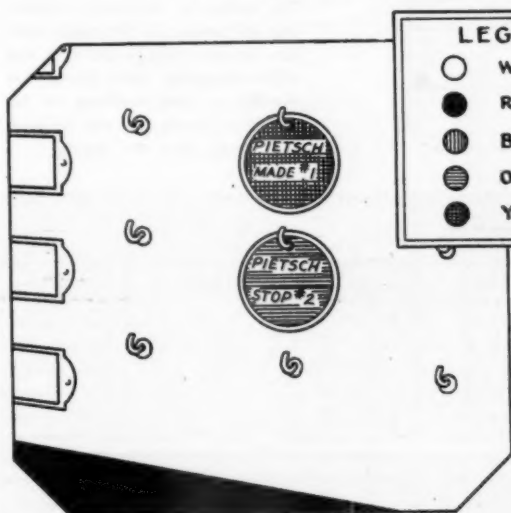
THE right to maintain shut off is almost universally the same in that it is illegal to connect electric current to any building without permission from the electrical inspection department. The inspection departments having no right to shut off are seriously handicapped in enforcing reinspection for they must depend on the cooperation of the utility. One inspection department which is empowered by ordinance to order the utility to disconnect has served the utility with approximately 2500 disconnect notices, all of which have been ignored. This situation is said to be the major hindrance to reinspection in this city of more than 375,000 population.

Know Where the Men Are

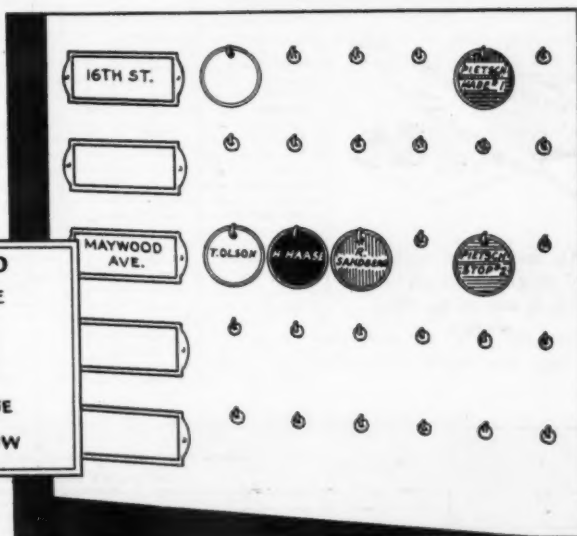


A visible system employed by the Kelso-Burnett Electric Company, Chicago, shows at a glance the location of journeymen, helpers, foremen and superintendents on the job

Each job is represented by a removable rectangular card mounted on a hinged board furnished with 6 hooks opposite each card. The names of all men employed are placed on round, metal edged paper tags. As the men and foremen are assigned to jobs, their tags are hooked on the board in their respective locations. A glance tells where the men are and changes are easily made. The board also includes a sick list, a not-working list and a part-time school list.



LEGEND	
○	WHITE
●	RED
◐	BLUE
◑	ORANGE
◒	YELLOW



A white tag represents a journeyman; a red tag a helper and a blue tag a foreman.

Each night the superintendent makes a list of his calls for the next day and orange tags showing the order of stops to be made are placed opposite the jobs. As these calls are made he phones the office and the tag, —which is yellow on the back side, is reversed showing that the call has been made.

[illegible]

On securing a contract a folder is made for the cost sheet and all orders and correspondence relating to the job. Then complete engineering data is made on all material to be ordered for the job, such as panels, pumps, conduit, wire, telephone and fire alarm equipment.



ITEM	QTY	UNIT	ISSUED	DATE	BY	REMARKS
EQUIPMENT & MISC.						
Motor, Station						
Compass						
Flash Bomb						
Trk. Markings						
Trk. Straps						
Progress Chart						
Battery, Cap.						
Pentameter						
F. & Signal Box						
Handheld Comp.						
F. & Collie						
Underground Penetr.						
Excavating						
Notes to Report						
Large Box Wire						
FINISHING MATERIAL						
Search Bagged						
Light Paper						
Clear Paper						
Clear Acetone						
Tram						
Reserve Team						
Trig Station						
Exp. Device Sapper						
Step Cable						
Ground Chain for Rifle						
Probes						
Warden Beads						
Common Beads						
Beacons of Pine						
NOTES						

4 men setting
6th floor pull box

5th floor
1 man + helper
installing outlets

4th floor

3rd floor

2nd floor

1st floor

Total - 5 men - 1 helper

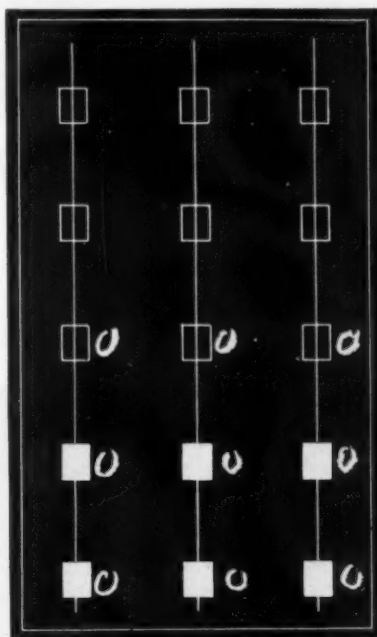
To facilitate ordering according to needs the foreman each day sends a rough chart to the office showing each floor, the number of men working on the different floors and the kind of work they are doing.

[illegible]

MATERIAL to save TIME



No idle workers waiting for material are found on the jobs of the Jandous Electric Equipment Co., New York, for their system of ordering material enables them to have it there on time. Storage on the job is also brought to a minimum



A riser diagram is used to check progress. Work completed is filled in with yellow crayon. A red "O" on the riser indicates that material has been ordered for this particular part of the job.

Four copies of each order for material are made. The original goes to the source of supply, the blue to the job, pink for office file and yellow for permanent copy.

Charts are kept on the office walls showing the conduit, wire and other material schedule. The chart on wire, for example, shows the amount of wire of each size allowed for the job and the dates and amounts that were actually drawn for the job. This chart has three advantages: (1) It prevents theft. (2) It serves as a check on the estimating department. (3) It prevents a surplus of material being left on the job.



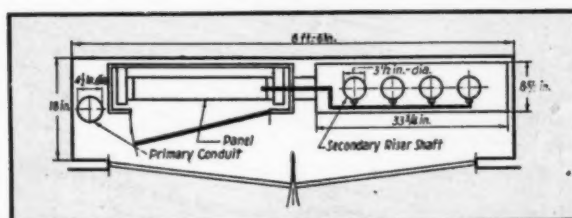
TUBULAR BUS

for

Secondary Distribution



A tubular bus system is employed for secondary distribution in the new Shell Oil Company building in San Francisco, Calif., wired by Charles A. Langlais. The risers consist of 4 tubes of 99 per cent electrolytic copper, 3 in. extra heavy iron pipe size, 3 1/2 inch outside diameter



The distribution panels on each floor are located adjacent to the riser shaft. The risers, furnished in 20 ft. lengths, are coupled by means of 8 in. screw couplings. The vertical height of the tubular bus run is 380 ft., half of which was supported in the sub-basement and half from the 29th floor.

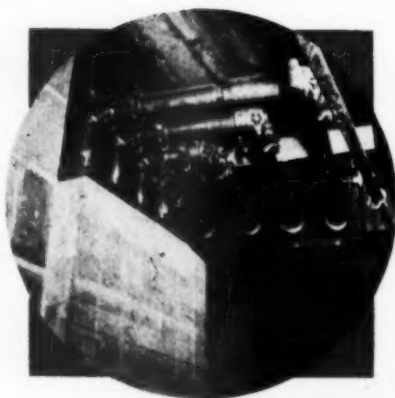
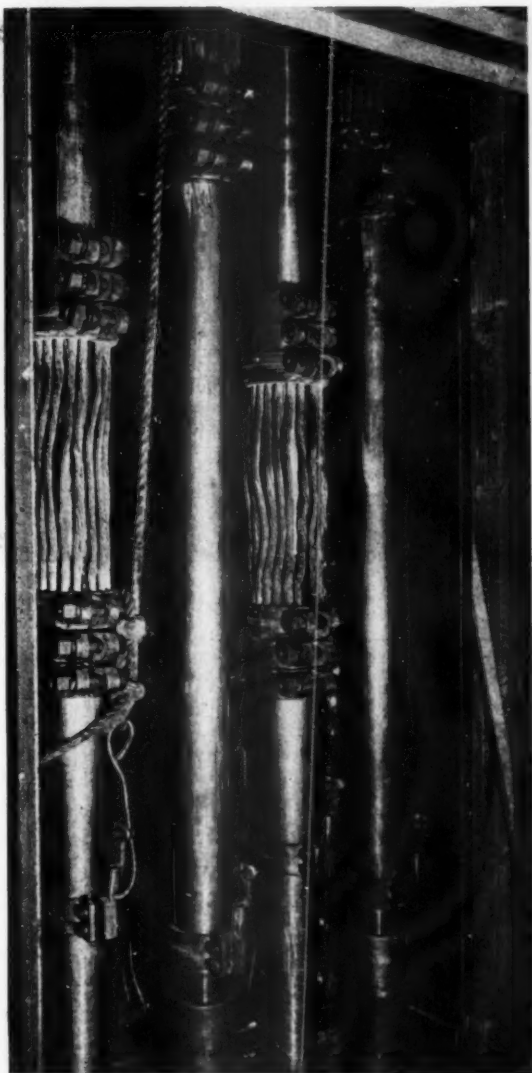


Diagram showing the small amount of space required to house the entire distribution system. These riser buses are spaced on 7 in. centers and are carried in a shaft lined with ebony asbestos. At each floor level is placed a space plate of ebony asbestos, made in two sections and notched to fit the buses.

The lower section consisting of four 190 ft. lengths of bus is supported on a reinforced concrete column, 8 ft. 4 in. high, in the sub-basement. Special flanges were anchored into this column and provided with insulating bushings.



In order to connect the top and bottom sections of the bus together and also provide for vertical expansion of the bus, expansion joints are installed on each conductor where the two sections meet. The joints are staggered to provide additional clearance.

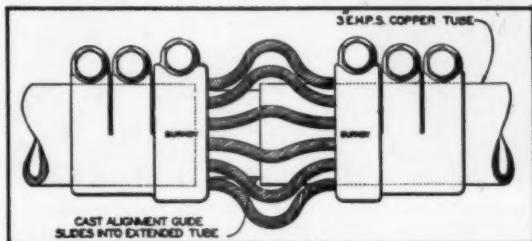
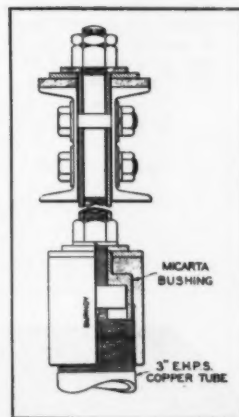


Diagram of the expansion joint.



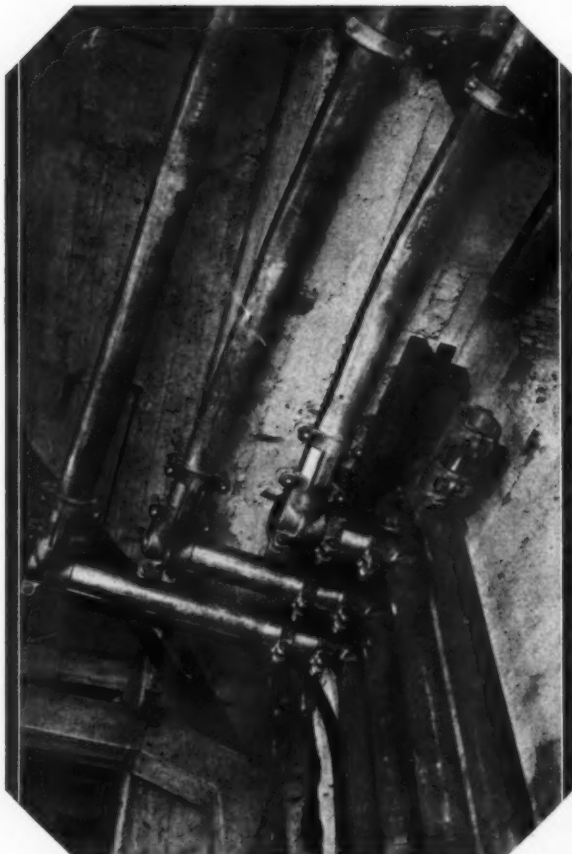
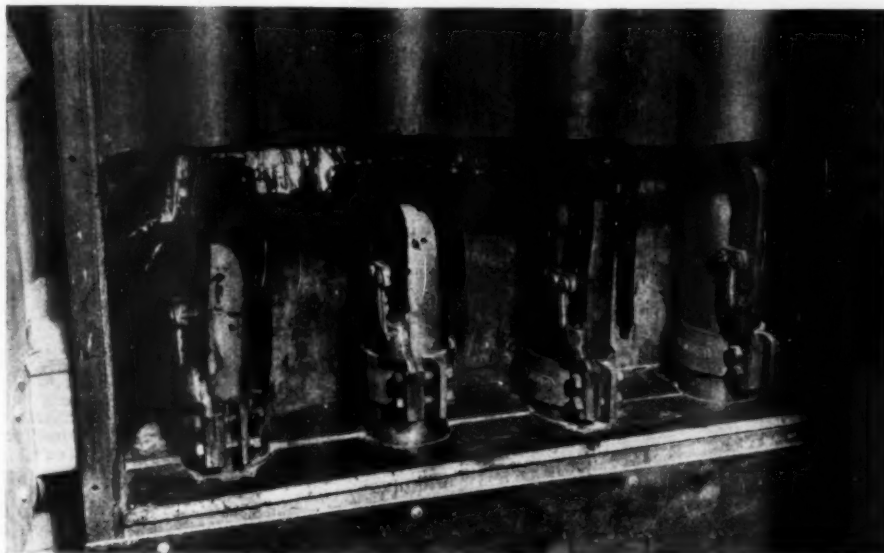
The upper section of 190 ft. is supported from 2 channels fastened to the floor beam of the 29th floor. On top of the channels was placed a $\frac{3}{4}$ in. steel washer, then a $\frac{3}{4}$ in. micarta washer and a smaller steel washer. Through these passes the bolt and its micarta sleeve.

Diagram of the hanger assembly. Inside the cast Everdur cap is placed a turned micarta bushing and through this is placed a 1 in. x 14 in. steel bolt. Threaded on the lower end of the bolt is a special steel washer which is also pinned to the bolt. Each 190 ft. of bus supported by one of these assemblies weighs about 3500 lbs.



Because of the extremely narrow clearance between buses, a micarta sleeve was slipped over the adjacent bus to prevent the cables of the joints from touching.

Connections between the panels on each floor and the buses are made with 0000 stranded cable. This cable is sweated into special lugs and further secured by an extension arm and U bolt. This lug is bolted into the special collar. In this instance a second tap is needed so another lug was fastened to the connector clamp.



Standard T connectors are used to connect horizontal runs to the vertical buses just below the upper bus hanger.

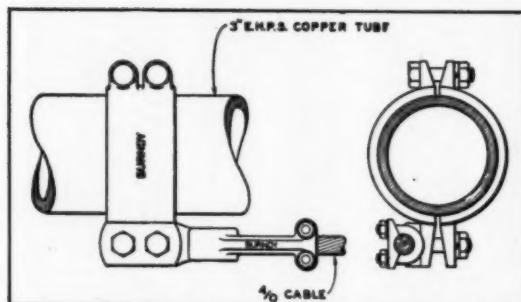
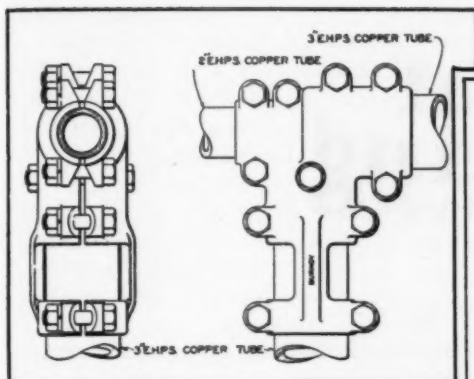


Diagram of the panel tap connection with special lug.

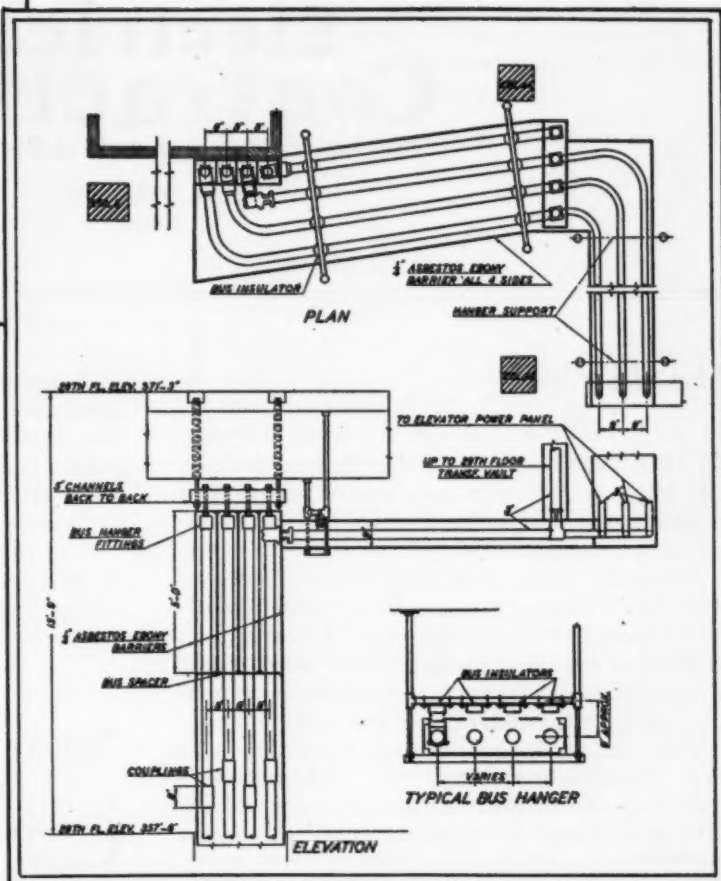
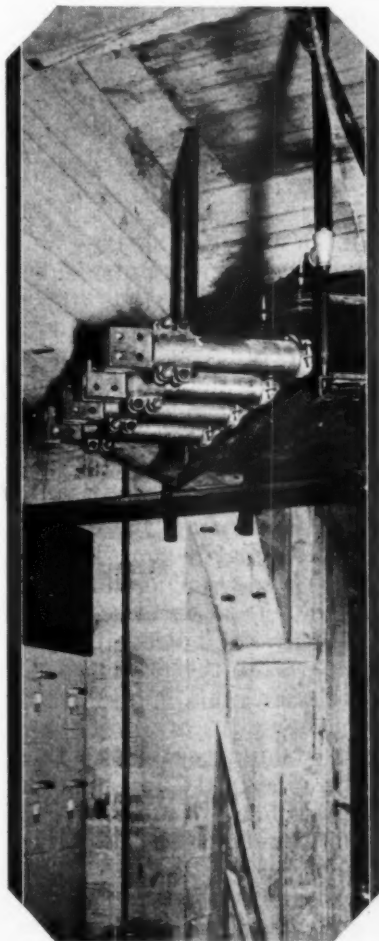


Special connectors are used in tapping the horizontal run with 3 in. tubular bus to the secondary side of the network protector on the 29th floor and 2 in. tubular bus leading to the elevator power switch-board.



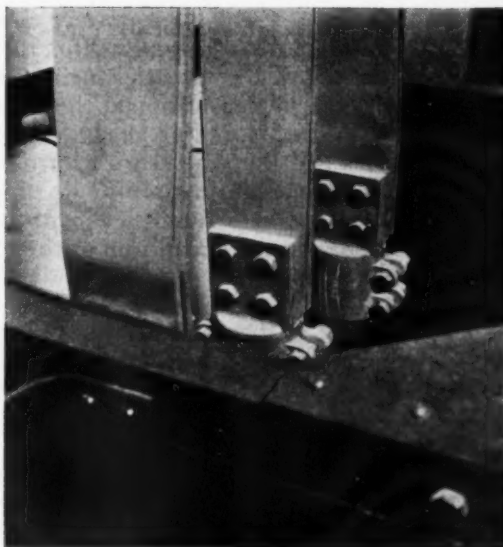
Special T connector for 3 in. and 2 in. extra heavy pipe size tubing shown at left.

The end of the horizontal trough in the sub-basement showing the use of end connectors to flat bus. All horizontal runs are supported on standard pillar type bus supports.



Detail of 28th floor horizontal run from transformer vault to secondary bus risers and elevator power panel.

On the 29th floor connection from the secondary side of the network protector to the secondary bus system is made by four 1/4 in. x 4 in. flat buses connected to the tubular buses with end connectors.



Electrical Contracting

With Which Is Incorporated The Electragist

S. B. WILLIAMS
Editor

The Silver Lining

THE year that is now drawing to a close, poor as it was in new construction, has not been without value to the electrical contracting business.

Normally many contractors are willing to stake their chance for business on their ability to bid lower than the other fellow. This method of securing business may be all right during normal times, but it isn't very productive when construction falls off.

This year a large number of contractors have found it necessary to create business and they have met with success. Others have developed a specialty that has been profitable.

The electrical modernization of industry program was started to stimulate business during depressed times and already has shown the amount of business that can be created by intelligent salesmanship.

If contractors learn to sell during poor times how much better equipped they are to build business during better years.

Hard times are the real years of progress because they stimulate people to do things that they otherwise would never attempt and 1930 has been no exception to the rule.

With Our Apologies

IN the November issue of ELECTRICAL CONTRACTING there appeared a four-page article entitled "Overhead," which was, without doubt, the finest and most comprehensive set of figures on electrical contractors' cost of doing business ever published. It was

not apparent, however, from the article as published that the data was gathered, and the results compiled, by the headquarters staff of the Association of Electragists, and for that omission of credit, we extend our apologies to A. E. I.

For many years the Association of Electragists has gathered data on the cost of doing business. The survey made this year is the best of all.

Tomorrow's Standards

CERTAIN central station interests accuse the contractor of insisting on too high a standard for wiring materials and their installation. Certain manufacturers, on the other hand, accuse the contractor of not having a quality consciousness and of being willing to install any equipment that is specified without trying to sell what he knows to be better. Who is right?

It is true that the contractors have stood for a high wiring standard—not because more money was involved (look at the bids), but because it gives a better job. The standards that they stand for are not arbitrary—they have all sprung from the practical experience of practical men.

These standards, however, are minimum. Is the contention of manufacturers true, that contractors for the most part are satisfied with the minimum standard? Are competitive conditions such that contractors cannot sell the better grades?

We are of the opinion that the wiring business is like any other business, in that the successful contractor, as a rule, is the one who insists on using the best material, and if the price is outside the competitive

figure he will try to sell the owner on the better product.

Like every other business there will, of course, be many who will be afraid to meet price competition with anything but price; but if too few contractors are willing to do a job for a quality line, the manufacturers have only one recourse and that is to sell direct to the customer, over the head of the contractor. This situation has been growing in certain lines for some time and it is not helping the contracting business at all.

When one considers the number of electrical specifications that either originate or are revised in contractors' offices, there is no good reason why the latest and most up-to-date equipment should not be included.

It has always happened that the high standard of today becomes the accepted standard of tomorrow. Why not remember that and sell tomorrow's standard today—be a progressive contractor.

The Sign of Quality

NINE years ago a new name was coined in the electrical industry—Electragist. This name was to mean to the electrical contracting business what "realtor" means to the real-estate business. It was to mean a reputable electrical contractor doing quality work, who was a member of his national association.

In the nine years the name has taken a respected place in the industry, but what of the public? It is only when the public appreciates the meaning of the name that its real value will be secured.

To carry this message to the public, as did the realtors, would require a tremendous amount of money, and this the Association of Electragists has never had. It was hoped that the individual members would be able to do much of this publicity job. Some have, and in a few places, the local chapters have conducted "electragist" publicity campaigns, but these efforts have been the exception rather than the rule.

There is only one way in which the meaning of the word "Electragist" will penetrate the public mind and that is by persistent publicity prepared by a central agency. This the association has decided to do and as a beginning has printed a quarter of a million

of booklets for members to send to their customers.

We urge every electragist to send for as many of these booklets as he feels he can use and that he send them out on every opportunity. The cost is extremely small but the effect should be great.

The Opportunity Is There

IN almost every issue of late we have carried pictures of men who have been in the electrical contracting business for forty years or more, almost back to the very beginning of the electrical industry as we know it today. These men all look prosperous—as though the business had treated them well.

Seeing their faces puts us in mind of the west, which not so many years ago was known as the land of golden opportunity. Sturdy-hearted pioneers from the east broke the trails. The weak perished, but the strong pushed forward and prospered.

Although thousands died even without reaching their destination; although thousands were ill equipped mentally or physically to make good; although thousands were thieves and scalawags, the opportunity was no less bright.

And the same is true of the electrical contracting business. Thousands may fail; thousands may be too poorly equipped as business men to make good; thousands may be unscrupulous, but the opportunity is still there and like the west it beckons to many. It beckons just as strongly today as it did forty years ago.

The problem then and the problem today is brains. These men had to use their brains to mount the obstacles of insufficient materials and lack of performance data. Almost every job required some new fitting that the contractor, as a rule, had to make himself.

Today success demands brains to know how to make a profit in the face of price competition, how to manage and keep down waste, how to estimate, how to run a job efficiently, how to sell, how to specialize.

After forty years the business has grown to over half a billion dollars annually with more than 30,000 contractors engaged therein—and the opportunity is greater than ever.

Code Chats

A Monthly Discussion of Wiring Practice and Questions of Interpretation, Presented with a View Toward Encouraging a Better Understanding of the National Electrical Code - - -

Conducted by F. N. M. SQUIRES

Assistant Chief Inspector, N. Y. Board of Fire Underwriters

Fuses for Small Motors

Should fuses be installed between the circuit wires and the terminal leads of a motor when the circuit is fused with 15 ampere fuses?

No. Exception 1 on top of page 119 says that "Motors of 2 HP. or less shall be considered as protected by the overload devices used to protect the conductors of motor circuits." As it works out, where the circuit is protected by 15 ampere fuses the motor is generally of 2 HP. or less and therefore the exception 1 quoted above is in effect and no other fuses are needed than the circuit fuse.

* * *

Seven No. 14 Wires on 3/4 in. Conduit

The paragraph (top of page 43) which follows Table I of paragraph 503-q, reads in part, "Four No. 14 (single braid, solid) wires may be installed in a 1/2 in. conduit and up to seven No. 14 wires in a 3/4 in. conduit."

Question:—Is this ruling to be construed as permitting seven No. 14 wires in 3/4 in. conduit, or only six No. 14 wires in 3/4 in. conduit?

Answer:—Seven No. 14 wires are permitted in 3/4 in. conduit. In this case "up to" means "up to and including." Knowing the proclivity of human nature to take the fullest advantage of any flexibility or seeming elasticity of any rule, the benefit of possible doubt must be given to the defendant (the installing contractor). If the Code had not wished to have the seven included, it would not have mentioned that number. Note from the article appearing in the November issue under the heading, "How to Figure Conduit Signs Under the 40%

Rule," that the cross section area of seven No. 14 wires is $7 \times .032$ which equals .224 and that 40% of the inside area is .213. A difference of only .011 square inches.

* * *

Festoon Lighting

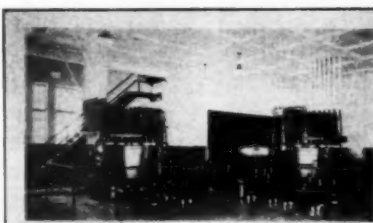
"Does 306a permit a lighting socket to be installed on any size wire without individual fuse protection or branch circuit protection, or should such lighting sockets be limited to fusing values as required in Article 8?"

Section 307a specifically requires "correct fusing." This means that the circuit wiring is to be so arranged that correct fusing for branch cir-

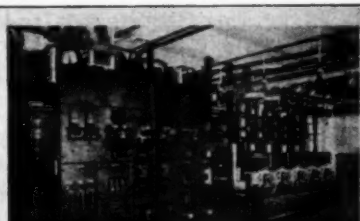
cuits as well as for conductor protection can be provided. Therefore, where medium size sockets are used a branch circuit protected by fuses of not over 15 amps. shall be present whether the branch circuit consists of one socket or several. Where mogul sockets are used, the limit of the fuse capacity is 40 amps., in which case the "branch circuit" wire would have to be not smaller than No. 6. The provisions of Article 8 must be complied with as well as section 612.

"Does the Code require rubber covered wires for festoon lighting?"

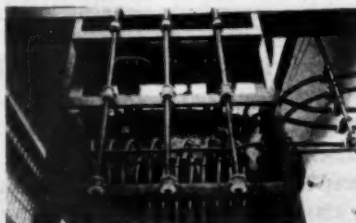
Yes. 307b specifically requires rubber covering. Further than that 501c requires rubber insulation for open wires in damp places under which



Temporary or permanent wiring of general nature. See Table 31. The wiring is not covered with a rubber sheath. The rubber sheath is made in America. The rubber sheath is made in America. The rubber sheath is made in America.



From one of our booklets illustrating 17,000 sq. ft. of rubber and plastic in high speed current breakers.



The wire of one of the main machines. The wire is not covered with a rubber sheath. The rubber sheath is made in America. The rubber sheath is made in America.



From one of our booklets. Note the arrangement of the wiring.

BOOKLET ILLUSTRATES INSTALLATION QUALITY:—Two pages of a 16-page booklet published by W. V. Pangborne & Co., electrical contractors in Philadelphia, Pa., illustrating the electrical installation of Philadelphia's Broad St. subway, which is 6 1/2 miles in length. The booklet is profusely illustrated and includes a complete description of the electrical work. With the exception of the signal and third-rail systems, and the small conduit in concrete, the Pangborne Co. installed all of the major electrical work. Several of these electrical contracts completed by this company have totaled \$1,300,000.

Electrical Contracting, December, 1930

FOR 13 Years TRICO Users Have Enjoyed

... Cold facts from enthusiastic users everywhere prove that a distinct and unequalled saving of money is derived from the *Superior Time Lag* in TRICO Fuses—pioneered by TRICO for 13 years.

TRICO *Superior* Time Lag

**Here's More Proof
that TRICO
Superior Time Lag
Saves Money**

THE consulting engineer of this industrial discarded bare link fuses because of five or six blowouts a week; also two or three burnt-up casings. Six months after the complete installation of TRICO Superior Time Lag Fuses, the engineer wrote us that they have not had a single burn-out, and that he had no idea there was such a difference in fuses.

If figures were available regarding loss of production of the 600 men in this plant, each time a bare link fuse had to be replaced, the saving in favor of TRICO would be much higher than shown here.

Comparison

3-600 Amp. 250-volt bare link fuses	\$ 19.80
@ \$6.60 each	
130 blows for the period 26 weeks, each blow requiring 4 150-Amp. links, a total of 520 links @ 9c each	46.80
52 casings during 26 weeks (2 per week) equals 52 fuses @ \$6.60 each	343.20
600 workmen idle. Time out each blow and rate per hour (don't know)	???
Total cost (exclusive of production loss)	409.80
3-600 Amp. 250-volt TRICO Renewable Fuses @ \$6.60 each	19.80
SAVING in favor of TRICO for the 6 months (exclusive of production gain)	390.00

(Name on Request)

ALL in Your Favor

These factors give the reasons why so many users, who insist on money-saving and dependable performance, have adopted TRICO Renewable Fuses exclusively.

Money-Saving Factors

No Premature Blowings
No Unnecessary Shutdowns
No Oxidized Contacts
No Charred Casings
Copper-to-Copper Contacts
Reduced Watt Loss
SUPERIOR TIME LAG

And they cost no more
than other makes of
renewable fuses!

Approved by
Underwriters

TRICO FUSE MFG. CO., 1007 McKinley Ave., MILWAUKEE, WIS.



Renewable

They're "Powder Packed"



scope lies festoon work. 604 says that type "A" (asbestos covered) is not suitable for use outdoors, and 605 says the same for slow burning insulation, while 606 says the same for slow burning weatherproof and 603 advised that varnished cambric is not suitable where moisture is present.

* * *

Tubing for Grounds Not Permitted

Paragraph 907, Grounding Conductors, in part reads as follows: "The conductor may be of copper or may be a rigid electrical conduit or pipe. Under this rule it will be permissible to use electrical metallic tubing in place of the usual electrical conduit?"

No. Electrical metallic tubing is given its name to differentiate it from conduit or pipe and tubing is not listed as being permissible as one of the conductors for grounding, for the Code does not intend that this thin wall material is to be used as a grounding medium.

* * *

Hat Cleaning Motors

Quite a few fires have occurred in hat cleaning stores from the use of improper motors on the cleaning machines. Felt hats are quite generally cleaned with gasoline, benzine, or other highly flammable cleaning liquids and then put on the machine which revolves it rapidly for a scrubbing or to dry by centrifugal force. This rapid whirling very effectively vaporizes the cleaning fluid and it needs then but a spark from a brush or sliding contact to set the whole thing off. With the proper mixture in the air, what a fine explosion may result! It should be recognized by contractor and inspector that the use of the flammable and highly volatile cleaning fluid puts the motor in a hazardous location where it must comply with the rules governing class I locations of Rule 3203, Section 3203-C.

* * *

Bushings Required for Old and New Cable

A number of the contractors in our territory do not at all favor the use of the new type ABC cable, therefore, they make all effort to procure sufficient quantities of the old type cable which still bears the Laboratories'

approval label. This ruling states that additional protection shall be provided at conductors. Is it understood that with the old type cable the so-called red fibre bushings are required? It is of course understood that with the ABC cable the bushings are mandatory.

A bushing is required with either the new type paper wound cable or the old type of cable with the braid. The Code purposely says that cable is to be adequately bushed, so that additional protection shall be afforded to the conductors and it therefore means that a bushing is to be inserted between the conductor and the armor.

* * *

Air Cooled Transformers

In many instances there is a prevailing opinion that air cooled transformers refer to that type of auto transformer commonly known as a balance coil. Balance coils do not meet the requirements of the present National Electric Code, therefore, some are of the opinion that all air cooled transformers do not meet the requirements of the present National Electric Code.

Since the so-called balance coil no longer meets the requirements of the present National Electric Code there is also an opinion prevailing that this prohibits the use of all types of auto transformers. However, auto trans-



BUSINESS 75 YEARS OLD:—H. H. Roth, Wilkes Barre, Penna., whose business was founded by his grandfather. Mr. Roth began doing electrical work at the time when locksmiths were beginning to venture into the business of installing door bells. His father secured the services of Thomas Edison's company in wiring one of the first houses in the town.

formers of certain types, when meeting certain other conditions of the system on which they are installed, do meet the requirements of the National Electric Code.

According to Sections 500e and 512 of the Code, auto transformers of the types specified, can be used in connection with polarity wiring to supply 110 volt from 220 volt, if the 220 volt system has one wire grounded. No type of auto transformer, however, can be used to supply 110 volt for lighting or appliance circuits from a circuit in which the voltage is higher than 250 volts. This is prohibited by another section of the Code.

W. R. SORGE.

* * *

Protection of Underground Service Conductors

Official Interpretation 56

QUESTION: With respect to underground service conductors and their protection against mechanical injury as called for in paragraph c of section 402.

(a) Is a lead covering to be considered as providing protection from mechanical injury?

FINDING: No.

(b) May the earth covering or fill of a trench in which lead cable is laid be considered as protection from mechanical injury and if so, what minimum depth of fill shall be acceptable?

FINDING: Local and individual conditions must determine in each case whether or not the cable will be subject to mechanical injury after the installation is made, and if so, what character and extent of protection is required.

(c) In the case of cables not lead-covered but having special "other means approved for the purpose," must said special other approved means be accepted as affording protection from mechanical injury?

FINDING: No. (See also answer to question b, preceding.)

Artificial Grounds

Official Interpretation 58

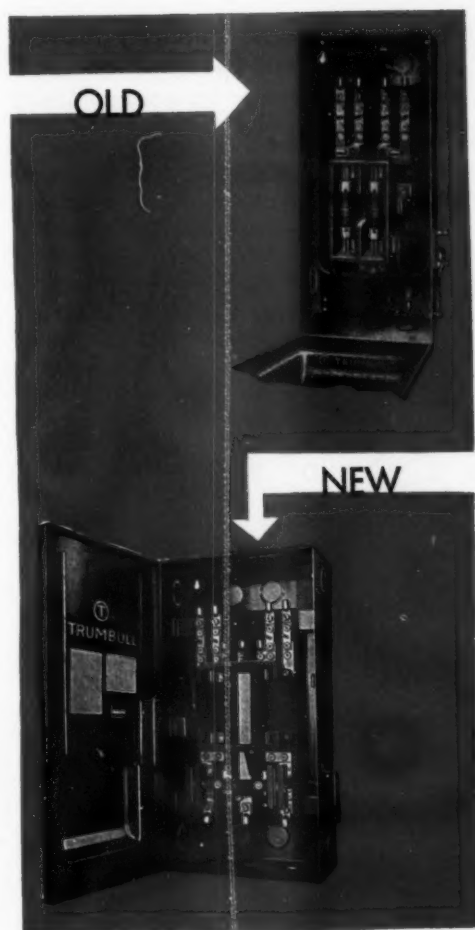
QUESTION: Does paragraph (d) of Section 904 of the National Electrical Code require, when artificial grounds are used, that there be two separate grounding electrodes, one connected to the service conduit and the other to the interior wiring system?

FINDING: The paragraph provides for two situations, the first being when the supply system is grounded at two or more locations not in the same building to a continuous metallic underground piping system. The other situation is when these two or more grounds to a continuous metallic underground piping system are not found.

When artificial grounds are used and the second situation, as described above, exists, there shall be two separate grounding electrodes for the interior wiring system ground conductor and for the service conduit and interior equipment ground respectively.



IMPROVED METER
SERVICE SWITCHES
MAKE WIRING EASIER



6 NEW FEATURES OF IMPROVED T DESIGN

- 1** More Wiring Space
- 2** Line Connections Go Straight Through
- 3** Contacts All Visible, Which Aids Inspection
- 4** Side Hinge Covers Instead of Drop-Bottom Hinge Cover
- 5** Blades of Double Break Construction
- 6** Top End of Boxes Are Equipped With Shutters Containing Twistouts to Take Bottom Connected Standardized Meters.

—With Accessible or Sealed Service Fuses.

—With or without Test Blades.

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Los Angeles **Seattle**

A GENERAL ELECTRIC ORGANIZATION

A. E. I.

News and Service Information

Material for this department is supplied by the headquarters staff of the Association of Electragists, International, 420 Lexington Avenue, New York, N. Y.

Extension of Modernization Plan Facilitated

Inquiries reaching the A.E.I. headquarters office from local Chapters indicate an active interest developing rapidly in the Modernization of Industries Plan.

Chapter executives desiring detailed information regarding its organization and operation, with a view of their Chapters initiating a similar activity in their own communities, will receive full particulars on request from the headquarters office.

Eleven Chapters have already secured a copy of the "Electrical Modernization of Industries Hand-Book," which is an important feature of the plan. Under a special arrangement of the A.E.I. with the Electrical Association of New York, A.E.I. members and Chapter executives may purchase copies at \$10 each, plus

postage, on orders placed through the headquarters office.

* * *

New Chapters

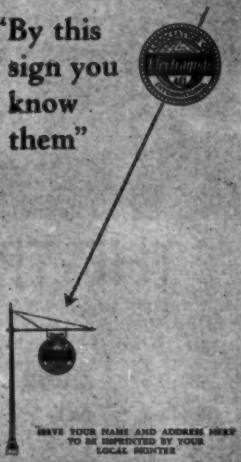
Since the report published in the November issue charters have been issued to new chapters in Nueces County (Texas), Hidalgo County (Texas), and Sioux Falls, S. D. Officers for the year have been elected as follows: Corpus Christi Chapter—President, George W. Smith, 619 Mesquite St., Corpus Christi, Texas; Secretary, B. F. White, 918 Staples St., Corpus Christi, Texas. Hidalgo County Chapter—President, W. F. Wortham, P. O. Box 785, Weslaco, Texas; Secretary, F. W. Hamman, 1410 Austin Ave., McAllen, Texas; Sioux Falls Chapter—President, H. W. Claus, 326 South Phillips Ave., Sioux Falls, S. D.; Secretary, M. Nickel, 120 W. 12th St.

Electragist Publicity Movement Inaugurated

On December 1 a quarter of a million advertising folders in color, envelope stuffer size, were placed in stock for distribution to A.E.I. members. This folder, shown in reduced size below, will tell to electragists' customers and prospects the story—"By this sign you know them."

The name "Electragist" since its adoption nine years ago, has gained recognition throughout the industry as designating the highest type of business concerns in the electrical contracting field. Distinguishing this type from the irresponsible and incompetent element of the business, it is steadily becoming established as "the emblem of responsibility."

The coming Trade Practice Conference before the Federal Trade

<p>BY THIS SIGN you are assured of good ELECTRICAL WORK</p> <p>Why it pays to do business with an Electragist*</p> <ol style="list-style-type: none"> 1 An Electragist uses only high grade and standard materials, knowing that his inferior products will run over the heads of the public. He upholds the National Electrical Code. 2 His work conforms to best practice in wiring, installation, involving safety to life and property, permanency, adequacy, efficiency and economy of operation, with proper regard for cost. 3 He aims to carry adequate stocks, but only sufficient to result in economies to himself and to his customers. 4 His servicing is dependable and trustworthy. No matter how big or how small the job, he does it to the satisfaction of the customer. 5 He endeavors to make a fair return on his investment. If he cannot make a just profit and maintain his quality and service standards at the same time, he frankly explains this to the customer. 6 He believes in and seeks to promote association work, realizing that the resulting interchange of ideas keeps his community in step with national progress. <p><small>* WHAT IS AN ELECTRAGIST? The word "Electragist" was adopted in 1921, and is registered as a trademark in the United States and Canada. Literally it means the person a leader in the business of high-grade electrical contracting, who is a member of the ASSOCIATION OF ELECTRAGISTS, INTERNATIONAL.</small></p>	<p>Why we are Electragists</p> <p>To build up a permanent, successful business in electrical contracting, we must have the good-will and confidence of each individual member of this community.</p> <p>We know that we must do quality work in every detail of every job—in order to deserve and win good-will and confidence.</p> <p>We know that our standards of quality and service must be widely known and understood to be appreciated by the community.</p> <p>By membership in the Association of Electragists, International—evidenced by this sign—we give assurance of quality and service to EVERY MEMBER OF THIS COMMUNITY—AND TO YOU.</p> <p>HAVE YOUR NAME AND ADDRESS HERE TO BE REPRODUCED BY YOUR LOCAL PRINTER</p>	<p>"By this sign you know them"</p>  <p>HAVE YOUR NAME AND ADDRESS HERE TO BE REPRODUCED BY YOUR LOCAL PRINTER</p>
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MORE PROFITS *with steel switchboards* *... whether you build or buy*

REGARDLESS of whether you build your own switchboards or purchase them complete, Westinghouse steel panels offer you new profits.

If you purchase your switchboards complete, the strength of steel panels allows all equipment to be mounted, panels wired and tested before shipment. As no supporting framework is required, this means a quick and easy installation. You make only the external connections after placing the switchboard.

If you assemble your own switchboards, steel panels again show new profits because their light weight reduces transportation costs and drilling is made easy as there is no danger of chipping.

Your customers will be impressed with the neat appearance of Westinghouse steel switchboards because of the excellent finish they take and the absence of all mounting bolts and vertical wiring on the rear of the panels. Also, they will like the dead-front feature of these switchboards.

Typical Westinghouse dead-front steel switchboard equipped with Westinghouse CL carbon circuit breakers.

D.M.F. 5179 and D.M.F. 5181 contain complete descriptions of Westinghouse steel panels and switchboards respectively. Request copies from our nearest office.



Service, prompt and efficient, by a coast-to-coast chain of well-equipped shops

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TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY EVENING.

Commission will place a high standard of business integrity upon the electrical contracting industry, and the proposed campaign is planned to show the public that this standard will be found wherever the Electragist emblem appears.

The aim is to educate the public to recognize in the name "Electragist" a guaranty of high standards of quality and service in electrical work. Each member is being asked to use the name or the member seal on his stationery, forms, checks, etc.

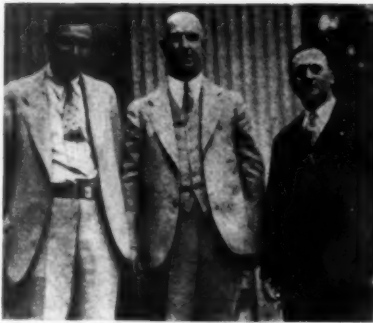
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Form of Specification Added to Electragist Standards

In order to bid intelligently, the contractor must know what work will be included in the contract, where the building will be located and how it will be built, what form of contract the successful bidder will be asked to sign and what general conditions will be embodied in the contract. Lack of clear and definite information on these points invariably results in financial loss to the owner.

To assist the architect or engineer, the Association of Electragists has drawn up general provisions in suitable form to be incorporated as the preliminary portion of any specification for an important electrical installation. These general provisions consist of clear and specific statements covering the above-mentioned items. The essential feature of the provisions is a statement to the effect that the form of contract to be employed will be the Standard Form of Agreement issued by the American Institute of Architects and that the General Conditions of the Contract, issued by the A.I.A. will form a part of the contract. Supplementary paragraphs deal with special details applying particularly to electrical installations.

The A.E.I. is having a special edition printed of the "Electragist Standards," embodying the recommended form for specifications, copies of which are to be placed in the hands of the 3,300 architects who are members of the American Institute of Architects. Each copy will carry on the inside front cover a list of A.E.I. members in each architect's territory, thus acquainting the architects with the group of electragists who are co-operating with American Institute of Architects in this project.



FIRM PROSPERS THROUGH GOOD SYSTEMS:—E. D. Brown, president of the McCleary-Harmon Electric Co., Detroit, Mich. (center) is now on the executive board of the A. E. I. On Mr. Brown's right is F. Earl Surrell, vice-president, and the third executive is Geo. F. Sherrin, treasurer. They have been associates for many years and specialize in large work. They credit their success to simple, thorough systems of accounting, good housekeeping in all departments and adequate equipment. A fine drafting room, well-kept stock and a special pipe shed are features of their set-up. The company owns two Packard sedans.

Standard Taper for Conduit Threads

The A.E.I. is making a survey through its Chapters and members of the taper of dies used by electrical contractors for threading conduit.

At the present time a large proportion of $\frac{1}{2}$ in. and $\frac{3}{4}$ in. conduit is made with $\frac{3}{8}$ in. taper (per foot) of threads, although some manufac-

turers use $\frac{3}{4}$ in. taper on these sizes. Practically all makers of the larger sizes of conduits use $\frac{3}{4}$ in. taper of the threads.

The advocates of $\frac{3}{8}$ in. taper assert that a $\frac{3}{4}$ in. taper leaves too little metal at the end of the conduit, particularly on the smaller sizes of conduit of which the greatest amount is used. Manufacturers are seeking standardization of threads of conduit in order that conduit fittings may also be standardized. Should the standard taper be $\frac{3}{8}$ in. or $\frac{3}{4}$ in.?

A large proportion of conduit is cut and rethreaded by the electrical contractors, with dies which are a part of every contractor's tools. What size of taper of dies is used commonly by electrical contractors — $\frac{3}{8}$ in. or $\frac{3}{4}$ in.? Do contractors use $\frac{3}{8}$ in. taper dies for $\frac{1}{2}$ in. and $\frac{3}{4}$ in. conduit and use $\frac{3}{4}$ in. taper for larger sizes, or is one size taper in dies used for all sizes of conduit? What experience do contractors have with standard fittings on threads cut with their hand dies? Does the $\frac{3}{8}$ in. taper permit as easy threading as $\frac{3}{4}$ in. taper? What has been shown from experience as to the butting of conduit with $\frac{3}{8}$ in. taper threads or $\frac{3}{4}$ in. taper?

Electrical contractors are invited to write directly to the Association of Electragists, International, replying to these questions.

NEW MEMBERS

The following applicants have been accepted into the A. E. I. since the publication of the list in the November issue:

MINNESOTA

Albert Lea:
Bailey & Reynolds

Fairmont:
Fairmont Elec. & Hdwe.

NEW YORK

Brooklyn:
Walker Electric Co.

Buffalo:
Modern Elec. Co.

New York City:
Utilities Electric & Supply Co.

SOUTH DAKOTA

Sions Falls:
Electric Supply Co., Inc.
Green Electric, Inc.

OHIO

Cincinnati:
Pleasant Electric Co.

TEXAS

Corpus Christi:
Gulf Electric Co.
Nelson Electric Co.
Smith Electric Co.

Donna:
Wilson Electric Shop

McAllen:
J. W. Davis Elec. Co., Inc.
Delta Electric Co.
J. W. Martin Elec. Co.

Mercedes:
The Electric Supply Co.
of the Valley

MEXICO

Mexico City, D.F.:
Carlos Macias

Contracting News

Information of Interest to Electrical Contractors consisting of items of news, short articles, practical ideas, etc. Our readers are invited to contribute to this department.

Waterloo Chapter Elects Officers

The Waterloo (Iowa) Chapter of Electragists recently held its annual election of officers as follows: H. R. Plowman, president; A. C. Sweetman, vice-president, and C. F. Nagle, secretary-treasurer. The board of directors is comprised of H. R. Plowman, A. C. Sweetman, W. R. Walker, L. B. Taylor and Milton Hartleip.

Although the chapter has only recently been organized and is in the stage of development, meetings are enthusiastically attended twice a month.

A plan of decorative lighting for the holidays is under way at present, which calls for uniform decorative lighting throughout the city.

Standing committees on credit control and trade policy have been assigned definite duties, and all members of the association are vitally interested in the work of the credit control committee.

Out of nine electrical contractor-dealers in Waterloo, eight are members of the chapter, and conditions are materially improved as a result of the organization and study of costs of doing business, eliminating the destructive methods of price cutting. This study will be continued throughout the next year.

* * *

Brooklyn Contractors Plan Community Organizations

The Brooklyn, N. Y., contractors have planned to organize eight community organizations throughout this borough. They have already organized in the Bay Ridge, Brownsville, Williamsburg and Bedford sections. Each section will function independently, but when all eight sections have organized, two officers from each group will convene at regular intervals to discuss the problems of their community, and probably debate or vote on issues affecting the entire borough.

Buffalo Association Invites Jobbers to Speak

The Niagara Frontier Electrical Contractors' Association, Buffalo, N. Y., is making considerable progress in clarifying the electrical situation in their city at least in so far as their own members are concerned. This association meets every second and fourth Wednesday, and since reorganization about a year ago, they have done very well in keeping up the interest and bringing members closer together. Their latest stunt is to invite to each of their regular meetings the head of a Buffalo wholesale electrical house, where he is given an opportunity to outline his policy to the contractors and to answer any questions that are asked. The jobbers have taken kindly to this plan and have gone the limit in frank discussion with these men who are their valued customers. The present officers of this association are: Clarence

(Continued on page 83)



NEW QUARTERS OF CLEVELAND LEAGUE:—The Electrical League of Cleveland has moved into its new home on the eighteenth floor of the Builders' Exchange Building. It is perhaps the finest league quarters in the country. At the left is shown a part of the display utilizing built-in niches which are all illuminated from above. The league's auditorium is lighted by twelve 3800-watt fixtures through which a variable intensity of from 1.8 to 108 ft. candles may be obtained. An intensity of 540 ft. candles may be obtained on the stage. At the right is the office of the president which is lighted by a specially designed fixture which is perhaps the first commercial unit to be equipped with a violet ray or S-1 lamp.

Now

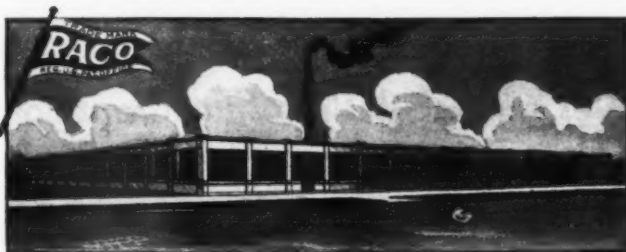
from our new and enlarged FACTORY

Comes the full line of "RACO"
approved Pri-Out Boxes and Hangers

Larger quarters and greater manufacturing facilities enable us to offer you a complete line of "RACO" Pri-Out Boxes, Hangers and Box Fittings.

Use "RACO" products—they mean better and more economical installations for YOU.

Write today for catalog.



PRI-OUTS are sold only
through your jobber

"RACO" PRI-OUTS

(All infringements will be vigorously prosecuted. U. S. Pat. 1709187. Reissue Pat. 17765. Canadian, No. 289335 and other patents pending.)



ONE PRY—
with any prying tool does it!

Pri-Outs are another big triumph for "RACO" products. "RACO" Pri-Outs are "knock-outs"—and our entire line of switch boxes now are manufactured with this exclusively patented feature.

SPEED INSTALLATION

Provide Safety for Wiremen Without additional cost and with the following advantages:

- (1) Wiremen do not injure fingers with Pri-Out Boxes. Discs do not have to be knocked inwardly and broken off with fingers as in old type boxes.
- (2) The slot in Pri-Out Boxes permit prying tool to be inserted and the disc pried out.
- (3) Pri-Outs are set flush with the box permitting $\frac{1}{8}$ " more room on inside of the box for wiring.
- (4) All these features over our regular old style line of knockout boxes at no additional cost.

PRI-RACO-OUTS

TRADE MARK

ROACH-APPLETON MFG. CO.

SOUTH BEND, IND.

NEW YORK CITY - 45 MURRAY ST.

Motor specialists— about face!

We repeat our last month's message to those Electrical Contractors who are Motor Specialists, or who are qualified to become such:

We believe that the motor specialists are the proper channels thru which "user" motor business should come to us, and that our sales representatives should not compete with our own dealers for motor business at any time, but on the other hand should seek and welcome an opportunity to cooperate with them.

That is the policy and attitude we have always maintained, and shall continue to maintain as long as there are Motor Specialists.

mobile. » » » When you enter an automobile agent's store, the agent sells you his make of car, and not any make you mention. » » » When a customer is in the market for an electric motor, isn't it wiser to do as the automobile agent does: talk one make only, the product of a manufacturer who will not only refrain from competing against you, but will even help you to land the order? » » » Certainly it is! And that is why so many Motor Specialists are choosing Wagner as their exclusive supplier of motors.

Yes, "about face"—that's the only way to express it. » » » Heretofore most dealers attempted to supply any make of motor which a prospective customer might happen to have mentioned in his inquiry. This is true even now. » » » But more and more Motor Specialists are realizing that it is better to make an "about face" and concentrate on one line of motors and build business along that line. » » » Consider your local Ford, Buick and Chrysler agencies and try to picture them satisfying any one's whims for any make of auto-

Wagner Electric Corporation

6400 Plymouth Avenue, Saint Louis, U. S. A.

MOTORS	TRANSFORMERS	FANS
SINGLE-PHASE	DISTRIBUTION	DESK WALL
POLYPHASE	POWER	CEILING
DIRECT CURRENT	INSTRUMENT	VENTILATING

L131-2XA

Suggested RESALE PRICES *for* Wiring Supplies

The prices listed on the following pages are merely suggested resale prices for the commonly used standard supplies and equipment employed in electrical construction work. They are based on average current trade costs throughout the country, very largely obtained from jobbers' price sheets, and are also based on average overhead charges.

• • •

Obviously, prices can be suggested only for the widely used products that are nationally distributed, and under no circumstances is this section intended to function as a directory of products or manufacturers.

• • •

The publishers wish to again emphasize that these are merely *suggested* resale prices and while every effort is made to make them universally applicable and accurate we cannot guarantee them or assume any responsibility for errors.

• • •

The prices appearing in this section will be completely revised each month as trade prices may change.

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Suggested Resale Prices for Wiring Supplies

These are merely suggested resale prices for the commonly used products that appear regularly on jobber price lists. They are figured on generally accepted principles for computing resale prices and should cover average conditions but are not guaranteed. (See note on title page.)

A-SUNDRIES

[illegible]

COUGH

Electrical Reset									
Style D Face Type Wood Face			Style F Flush Wood Face			Style F Flush Metal Face			
Number of Drops	Number	Price	Number	Price	Number	Price			
4	DA 4	\$21.50	FA 4	\$44.50	FA 4	\$40.80			
6	DA 6	26.50	FA 6	40.30	FA 6	35.00			
8	DA 8	31.50	FA 8	53.80	FA 8	50.70			
10	DA 10	36.50	FA 10	58.25	FA 10	64.70			
12	DA 12	43.10	FA 12	64.25	FA 12	71.30			
15	DA	.....	FA 15	73.10	FA 15	81.50		
16	DA	56.50							
20	DA 20	69.75	FA 20	88.15	FA 20	98.00			
Add for each drop on any of above—\$4.15 per drop									

ADAPTORS & REDUCERS

For Sockets and Vases					
	Arrow	Benj. Bryant	G. E. Hubbl.	Price	
Mogul to Medium.....	292	98	421	070	\$0.50
Medium to Candelabra.....	392		392	35699	.25
Candelabra to Miniature.....	391		391		.20
Medium to Intermediate.....	492		9691	2644	.492
Small Blades to Medium.....				652	5424
Plug in Pull Socket.....	35024	1006	35024		1.90
Vase Adapters, Benjamin No. S. 831.		832, 833	Each.....		2.00

SOCKET EXTENSIONS

Benjamin No. 91 Socket Extension—Ea. \$.45

EXTENSION ARMS FOR PULL SOCKETS

For Brass or Porcelain Sockets with	8"-10"-12" or 14" Reflec.	\$0.55
	16"-18" or 20" "	.65

ATTACHMENTS FOR PULL SOCKETS

For 8" to 14" Reflectors No. 5828-5829-5857-5858.....	\$.55
For 16" to 20" Reflectors No. 5853-5854-5859-5860.....	.65

ADJUSTERS

For Cords		Price
Universal Cord Adjuster	Standard Size No. 1417 3/4" Long.....	\$ 10
"	" Factory No. 1418 5/4" Long.....	.15
"	" Reinforced No. 1419 5/4" Long.....	.20
Ball Type No. 1403 & 5 for Type C Cord.	3/4 hole.....	.10
"	No. 4634 & 5 for Reinforced Cord. 3/4 hole.....	.12

ACORNS & TASSELS

Luminous Acorns and Pendants for Pull Chain.....	\$0.30
Brass Acorns and Tassels for Pull Chain.....	.10
Brass Acorns Adjustable for Linen Cord.....	.10
Insulating Link for Pull Chain.....	.12

BOXES, SWITCH

STANDARD SWITCH BOXES

	Depth		Black	Price
			Glad.	
For Loom	2, 2½ or 2½"	Without clamps	\$.16	\$.21
.....	2, 2½ or 2½"	With ..	.18	.22
For Metallic Cable.....	2, 2½ or 2½"	With ..	.16	.21
.....	3"	With ..	.32	.36
For Rigid Conduit.....	1½ to 2"	Without ..	.21	.26
.....	3 & 3½"	Without ..	.32	.36
Spacers—For Spacer on 1 deduct from any of above prices....			.04	.05

With BRACKETS or EXTENDED EARS or LATH SUPPORTS

		Price	
		Black	Galvd.
Depth			
For Loom.....	2, 2½ or 2¾"	\$.20	\$.24
" ".....	2, 2½ or 2¾"	" .22	" .26
For Metallic Cable or Loom..	2, 2½ or 2¾"	" .28	" .33
" Rigid Conduit.....	2 to 2¾"	" .25	" .30

SECTIONAL BOXES

	Boxes		Spacers	
	Black	Galvd.	Black	Galvd.
* For Loom or Romex.....2-2 1/4" Deep	\$0.20	\$0.22	\$0.04	\$0.05
* Rigid or Flex Conduit.....2 & 2 1/2" "	.22	.24	.05	.06
* Flex, Met. Conduit Only.....2" "	.25	.27	.05	.06

SOLID GANG BOXES—GALVANIZED

	2 Gang	3 Gang	4 Gang	5 Gang	6 Gang	7 Gang	8 Gang
Price of Box...	\$.75	\$1.15	\$1.50	\$2.00	\$3.75	\$5.65	\$6.10
Price of Cover...	.38	.55	.75	.95	1.80	3.20	3.65

TANDEM SWITCH BOXES

		Black			Galvanized		
Loom, BX or Conduit		2 Gang	3 Gang	4 Gang	2 Gang	3 Gang	4 Gang
Tandem Boxes 1½ & 2" Deep		\$6.68	\$1.10	\$1.63	\$6.81	\$1.23	\$1.90
" 2½ & 2½"		.81	1.23	1.90	.95	1.37	2.18

DOOR SWITCH BOXES

	Black	Galvd.
For Rigid or Flexible Conduit without Clamps.....	\$.50	\$.55
" " " " " with Clamps.....	.55	.65

LAUNDRY BOXES

Gem-Appleton or Raco, etc., with Single Receptacle.....	Black \$1.10	Galvd. \$1.25
Duplex	1.25	1.35

For Concrete Boxes See Page PL-5.
For Solid Gang Boxes See Page PL-6.

BOXES & COVERS, OUTLET

CEILING BOXES, ROUND

Univer- sal Nos.	Size and Description	Depth	Knockouts Bottom Side	Price Black Galvd.
36115	3/4" With Lugs	3/4"	3-1/2" & 4" Loom	\$0.12 \$0.13
36116	3/4" No	3/4"	3-1/2" & 4"	.10 .12
36125	3/4" With "	3/4"	3-1/2" & 4"	.14 .16
36126	3/4" No	3/4"	3-1/2" & 4"	.12 .14
36716	3/4" Flat Plate with Clamps	3/4"	3-1/2" & 4"	.09 .11
56111	4" With Ears	5/8"	5-1/2" or 6" K.O.	.10 .12
56112	4" No	5/8"	5-1/2" or 6" K.O.	.09 .11
56115	4" With Ears-Loom & Cond.	5/8"	5-1/2" or 6" Loom	.11 .14
56116	4" No	5/8"	5-1/2" or 6"	.11 .09
56121	4" With Ears	5/8"	5-1/2" or 6" K.O.	.14 .16
56122	4" No Ears	5/8"	5-1/2" or 6" K.O.	.10 .12
56125	4" Ears-Loom & Conduit	5/8"	5-1/2" & 6" Loom	.16 .19
56126	4" No Ears	5/8"	5-1/2" & 6"	.14 .16
56712	4" Flat Plate	5/8"	5-1/2" or 6" K.O.	.09 .11

OUTLET BOXES, OCTAGON

Univer- sal Nos.	Size and Description	Depth	Knockouts Bottom Side	Price Black Galvd.
24151	3/4" Oct.-Conduit Box	1 1/4"	1-1/4" 4-1/4"	\$0.11 \$0.13
24151	3/4" " "	1 1/4"	1-1/4" 4-1/4"	.12 .15
24151 FS 3/4"	" " With Stud	1 1/4"	1-1/4" 4-1/4"	.21 .23
54151	4" Oct.-Conduit Box	1 1/4"	5-1/4" 4-1/4"	.14 .17
54151	4" " "	1 1/4"	5-1/4" 4-1/4"	.16 .19
54151 FS 4"	" " With Stud	1 1/4"	5-1/4" 4-1/4"	.21 .23
54151 FS 4"	" Cond. & Loom B.	1 1/4"	9-1/4" 12-1/4"	.20 .25
54171	4" Conduit Box	2 1/4"	11-1/4" 14-1/4"	.25 .28

COVERS

For 3 1/4"-3 1/2"-4" Octagon or Round Boxes

			Black	Galvd.
24C-1	3 1/4"	Blank Cover Flat	\$0.05	\$0.07
24C-2	3 1/2"	Raised	.05	.07
24C-6	3 1/2"	Flat with 1/2" K. O. in Center	.06	.08
24C-7	3 1/2"	Raised with 1/2" K. O.	.06	.08
24C-12	3 1/2"	1/2" Metal Bushing	.06	.08
24C-25	3 1/2"	Spider for Switch or Receptacle	.07	.09
24C-31	3 1/2"	Federal Sign	.06	.08
24C-33	3 1/2"	Flat with 1 1/4" hole for other	.20	.22
24C-35&36	3 1/2"	Raised with 1 1/4" hole for other	.06	.08
24C-39	3 1/2"	Flat for fluted devices	.18	.20
54C-1	4"	Blank Cover Flat	.05	.08
54C-2	4"	Raised	.06	.09
54C-3	4"	Raised Open 1/2" Deep	.08	.08
54C-6	4"	Flat with 1/2" K. O. in Center	.06	.09
54C-7	4"	Raised with 1/2" K. O.	.07	.10
54C-12	4"	1/2" Metal Bushing	.06	.09
54C-25	4"	Spider for Switch or Receptacle	.07	.09
54C-31	4"	Federal Sign	.07	.09
54C-33	4"	Flat with 1 1/4" Hole for Std.	.20	.22
54C-35-6	4"	Raised with 1 1/4" Ring	.06	.08
54C-39	4"	Flat for Fluted Devices	.20	.22
54C-48	4"	Raised with 1 1/4" High Open	.07	.10

OUTLET BOXES—Square 4" & 4 1/16"

Uni- versal No.	Size and Description	Depth	Knockouts Bottom Side	Black	Price Galvd.
51151	4" Sq. Comb. Gas & Elect.	1 1/4"	5-1/4" 8-1/4"	\$0.16	\$0.20
51151	4" Sq. Comb. Gas & Elect.	1 1/4"	5-1/4" 8-1/4"	.18	.22
52151	4" Conduit Box	1 1/4"	5-1/4" 10-1/4"	.16	.20
52151	4" Conduit Box	1 1/4"	5-1/4" 10-1/4"	.18	.22
52171	4" Conduit Box	1 1/4"	5-1/4" 10-1/4"	.60	.60
72151	4 1/16" Conduit Box	1 1/4"	5-1/4" 10-1/4"	.50	.50
72171	4 1/16" Conduit Box	1 1/4"	5-1/4" 10-1/4"	.54	.54

COVERS For 4" & 4 1/16" Square Boxes

52C-1	4" Sq. Blank Flat			\$0.08	\$0.10
52C-2	4" Raised			.11	.13
52C-3	4" Raised 1/2" High Open			.12	.15
52C-6	4" Flat with 1/2" K. O. in Center			.10	.12
52C-7	4" Raised with 1/2" K. O.			.13	.16
52C-12	4" 1/2" Metal Bushing			.11	.13
52C-13	4" 1/2" for Rect. Switch or Recept.			.10	.13
52C-14	4" 1/2" for Rect. Switch or Recept.			.10	.13
52C-15	4" 1/2" for Rect. Switch or Recept.			.15	.17
52C-16	4" 1/2" for Rect. Switch or Recept.			.18	.21
52C-17	4" 1/2" for Rect. Switch or Recept.			.13	.16
52C-18	4" 1/2" for Rect. Switch or Recept.			.15	.17
52C-19	4" 1/2" for Rect. Switch or Recept.			.21	.23
52C-21	4" 1/2" for Rect. Switch or Recept.			.23	.26
52C-28	4" Flat Spider for Snap Switches			.15	.17
52C-31	4" Raised for Sign Rec.			.09	.10
52C-35-36	4" Fluted Devices			.14	.16
52C-39	4" with 2 1/2" Opening			.27	.30
52C-48	4" For French Fixture			.10	.13
52C-57	4" For Single Sw. 1 1/4" High			.34	.37
52C-62	4" For Single Sw. 1 1/4" High			.10	.12
72C-1	4 1/16" Sq. Blank Flat			.27	.27
72C-2	4 1/16" Raised			.32	.32
72C-3	4 1/16" Raised Open			.34	.34
72C-7	4 1/16" With 1/2" K. O. in Center			.34	.34
72C-12	4 1/16" 1/2" Bushing			.34	.34
72C-14-15	4 1/16" 1/2" for Switch or Rec.			.36	.36
72C-18	4 1/16" 1/2" for Switch or Rec.			.50	.50
72C-48	4 1/16" Open 1/2" High			.34	.34
Specia l	4" Cover for One Push or Toggle Switch or Single Duplex Receptacle			.18	.23
For Red	4" Cover Two Push or Toggle Switches or Two Receptacles or Any Combination of Two Devices			.32	.36
Seal Work					

EXTENSION RINGS For Octagon & Square Boxes

25151	3 1/4" Octagon Ring—1 1/4" Deep	\$0.23	\$0.25
53151	3 1/2" Square Ring 1 1/4" Deep	.25	.27
73151	4 1/16" Square Ring 1 1/4" Deep	.60	.60
53171	4" Octagon Ring 2 1/4" Deep	.44	.48
53171	4" Square Ring 2 1/4" Deep	.70	.70
73171	4 1/16" Square Ring 2 1/4" Deep	.65	.65

HANDY OR UTILITY BOXES & COVERS
For Use With Rigid Conduit

Description	Universal Numbers	Price
Box 3 1/4"x1 1/4"x1 1/4" For Rigid Cond.	58151	\$0.22
Box 4 1/2"x1 1/4"x1 1/4" For Rigid Cond.	58361	.22
Box 4 1/2"x1 1/2"x1 1/2" For Rigid Cond.	.22	.22
Box 4 1/2"x1 1/2"x1 1/2" For Rigid Cond.	58371	.22
Box 4 1/2"x1 1/2"x1 1/2" For Rigid Cond.	.60	.60
Cover Flat Steel Closed	58C1	.10
Cover Porcelain with Holes	.13	.13
Cover for Sgle. Receptacle	58C5	.18
Cover for Duplex Receptacle	58C7	.18
Cover for Toggle Switch	58C30	.18
Cover for Sgle. Push Switch	58C3	.18
Cover for Sign Receptacle	58C33	.18
Cover for Snap Switches	58C28	.18
Cover with 1/2" K. O.	58C6	.16
Cover with 1/2" or 3/4" Nipple	.27	.27
Cover with Bushing for Cord	58C11	.16

CONCRETE BOXES WITH COVERS

Box & Back Plate with 1/2" Stud.	\$0.27	\$0.30	\$0.35	\$0.40	\$0.45	\$0.50	\$0.60
Box & Back Plate less 1/2" Stud.	.23	.27	.30	.34	.36	.40	.45
Plate only 4 1/2" Round without Fixture Stud 3 1/4" and 2 1/4" K. O.	.40	.40	.40	.40	.40	.40	.40
Plate only 4 1/2" Round with 1/2" Fixture Stud 3 1/4" and 2 1/4" K. O.	.15	.15	.15	.15	.15	.15	.15
Plate only 4 1/2" Round with 1/2" Fixture Stud 3 1/4" and 2 1/4" K. O.	.20	.20	.20	.20	.20	.20	.20

SOLID GANG BOXES

Covers Extra

Galvd. Only	2	3	4	5	6	7	8
Box Price	\$.75	\$1.15	\$1.50	\$2.00	\$3.75	\$5.65	\$6.10
Cover	.38	.55	.75	.95	1.80	3.20	3.55

BOXES, OUTLET

NEW CODE OUTLET BOXES
Box Only

Size	Stud	Clamps	Bush Plates	Price	
3 1/4"x1 1/4" Round	Yes	Two	No	\$0.23	
3 1/2"x1 1/2" Round	Yes	Two	No	.27	
3 1/2"x1 1/2" Octagon	No	Two	Two	.23	
3 1/2"x1 1/2" Octagon	Yes	Two	Two	.27	
3 1/2"x1 1/2" Round	No	Two	No	.18	
3 1/2"x1 1/2" Round	Yes	Two	Two	.23	
3 1/2"x1 1/2" Octagon	No	Two	Two	.23	
3 1/2"x1 1/2" Octagon	Yes	Two	Two	.27	
4 1/2"x1 1/2" Octagon	No	Two	Two	.27	
4 1/2"x1 1/2" Octagon	Yes	Two	Two	.32	
G.E. Cable Boxes for Straight Electric or Combination No. 5200-01.....					.20
Hope Cable Boxes for Straight Electric or Combination No. 2 & 4 & 14.....					.20
Thomas & Betts No. 565-66-67-68 Standard Cable Boxes.....					.22
Thomas & Betts No. 553-554 Dead Ground Cable Boxes.....					.35
Thomas & Betts No. 160-161 Flush Wall Type Cable Boxes.....					.50

BAR HANGERS FOR OUTLET BOXES
Boxes Extra

(With 1/2" Fixture Stud)	(With 1/2" Stud add 6c ea.)	Price Margin
Straight Bar 18" Long		\$0.23
Straight Bar 24" Long		.30
Shallow Offset Bar 19 1/2" Long		.35
Shallow Offset Bar 24" Long		.35
Deep Offset Bar 19 1/2" Long		.28
Deep Offset Bar 24" Long		.35
Straight Old Work Bar 12"		.15
Box Cleat Bar 21"		.12
Straight Saddle Bar		.20

SET-UP BOXES WITH BARS

Size	Ears	Clamps	Bush Plates	For Loom	Galvd. Price
3 1/4"x1 1/4" Round	No	None	None		\$0.30
3 1/2"x1 1/2" Round	No	Two	None		.35
3 1/2"x1 1/2" Round	Yes	None	None		.35
3 1/2"x1 1/2" Round	Yes	Two	None		.40
For New Code Boxes					
3 1/4"x1 1/4" Oct.	Yes	Two	None		.45
3 1/2"x1 1/2" Oct.	Yes	Two	Two		.50
3 1/2"x1 1/2" Round	No	Two	None		.45
3 1/2"x1 1/2" Round	No	Two	Two		.45
4 1/2"x1 1/2" Oct.	Yes	Two	None		.50
4 1/2"x1 1/2" Oct.	Yes	Two	Two		.50
For Conduit					
4x1/2" Round	No	None	None		.30
4x1/2" Round	Yes	None	None		.35

BUSHINGS & LOCKNUTS

BUSHINGS & LOCKNUTS
For Rigid Conduit

Locknuts—Each.....	1" \$.01	3/4" \$.01 1/2	1" \$.02 1/2	1 1/4" \$.05		
Bushings—Each.....	.02	.02 1/2	.05	.08		
Locknuts—Each.....	1 1/2" \$.08	2" \$.11	2 1/2" \$.19	3" \$.32	3 1/2" \$.40	4" \$.58
Bushings—Each.....	.10	.20	.30	.40	.58	1.40

PORCELAIN CLAMP BUSHINGS
"Federal" or Equivalent

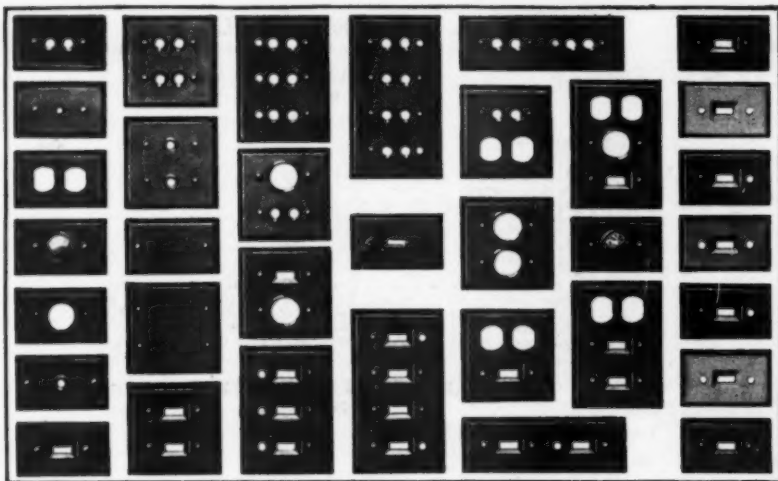
No.	K. O.	Inside Size	Outside Size	Wire Size	Bushing Each	Extra Ring Each
A-1	1/2"	1/2"	1/2"	No. 10	\$0.08	\$0.04
A-1 1/2	1 1/2"	1 1/2"	1 1/2"	No. 10	.10	.04
A-2	1 1/2"	1 1/2"	1 1/2"	No. 8	.10	.04
A-3	1 1/2"	1 1/2"	1 1/2"	No. 3	.12	.05
A-4	1 1/2"	1 1/2"	1 1/2"	No. 00	.15	.07
A-5	1 1/2"	1 1/2"	1 1/2"	450 CM	.22	.10
A-6	1 1/2"	1 1/2"	1 1/2"	1 Mill. CM	.45	.12
B-1	1 1/2"	1 1/2"	1 1/2"	No. 10	.20	.04
K-1	1 1/2"	1 1/2"	1 1/2"	No. 10	.32	.04
K-2	1 1/2"	1 1/2"	1 1/2"	No. 8	.37	.05

"MULTI" PORCELAIN CLAMP BUSHINGS

No.	Inside Size	Outside Size	For Wires	Each Complete	Price
10	1/2"	1/2"	14 B & S	\$0.08	
12	1/2"	1/2"	14 B & S	.12	
15	1/2"	1/2"	14 B & S	.10	
20	1/2"	1/2"	6 B & S	.10	
30	1/2"	1/2"	6 B & S	.12	
40	1/2"	1/2"	000	.20	
55	1 1/2"	1 1/2"	350,000	.30	
60	1 1/2"	1 1/2"	600,000	.38	
			1,000,000	.45	

PORCELAIN NO CLAMP BUSHINGS
Multi- With Spring Clip, Not Threaded

Catalog No., Multi	90A	90B	91	92A	92B
Size of Hole	1/2"	1/2"	1/2"	1/2"	1/2"
To Fit Hole	1/2"	1/2"	1/2"	1/2"	1/2"
Price	\$0.06	\$0.06	\$0.06	\$0.07	\$0.07



"Finding the Needle" in your Haystack...

FINDING exactly the right plate to fit that special application is sometimes like looking for the proverbial "needle in the haystack". No longer need this be a troublesome and expensive detail for you.

The Cutler-Hammer policy of bringing you the latest in electrical design and construction—to give you only highest quality items which improve every wiring job—is once again emphasized. Last month Cutler-Hammer announced six new devices—three of which are repeated here. Now, Cutler-Hammer offers the unusually complete line of Reynolite Molded-Bakelite Flush Plates.

A plate for every purpose and some plates you aren't called upon to furnish ordinarily—all are here in the *extensive* Reynolite line. As pioneers of Molded Plates Reynolite covers the widest range of combinations, sizes and colors. It is this wide range—this unusual selection—which means much in meeting *all* of your customer's needs.

Made from genuine heavy bakelite, C-H "Reynolite" Plates are tough, and will not chip, crack or punch out in use. Their finish does not fade nor discolor, they do not scratch nor mar easily—are individual in design and flexible in use. These features mean much toward satisfied users, elimination of breakage troubles, etc.

Colorful, mar-proof C-H "Reynolite" Plates will add a touch of refinement to any wiring job. The home owner will appreciate their beauty, their practical long-wearing qualities. Ask your wholesaler to show you C-H "Reynolite" Plates. Test them. See if they aren't the strongest, best looking flush plates you have ever used.

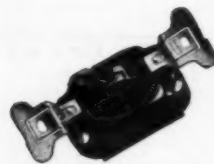
CUTLER-HAMMER, Inc.

Pioneer Manufacturers of Electrical Apparatus
1258 St. Paul Ave. Milwaukee, Wisconsin

CUTLER HAMMER

MODERN WIRING  NECESSITIES

The complete Reynolite line of plates covers the widest range of individual plates as well as combinations for every ordinary need plus many combination plates for your special requirements. Toggle flush plates, for example, are available up to and including six gang plates; all plates are available in light and dark walnut finishes, etc. Only high quality bakelite is used. Toughness of material prevents chipping or breaking—yet permits light weight and artistic design. Finishes unchanged by atmospheric conditions—heat or cold—will not tarnish, discolor, corrode nor crumble. Reynolite plates harmonize with all interiors—always look well. For fine appearance and granite durability—sell Reynolite.



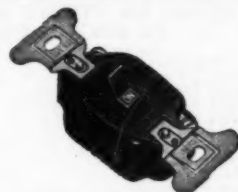
Catalog No. 7291

New, completely enclosed, dust-proof C-H Lock Type Switch. Mechanism sets on soft, springy rubber cushions for remarkable quiet action. Heavy phosphor bronze contact blade to prevent "bounce" or pitting—self cleaning contacts—automatic kick-off. Heavy walled C-H Thermoplas construction. Single pole type illustrated. Fits all standard toggle switch plates.



Catalog No. 7905

Small, compact, easily wired—the C-H Warning Light of Molded C-H Thermoplas holds a 2 c.p. 125 volt intermediate base lamp in perfect contact. Mounting bracket of heavy, one-piece steel, cadmium plated. Contacts are one piece integral with terminals.



Catalog No. 7281

The mechanism of the "Rubber-mounted" Toggle Switch is "full-floating" on two resilient rubber cushions. No screws and but one rivet. No metal connections to transmit sound. Short, stubby contact blades prevent "bounce"—dust-proof case of heat-proof, crack-proof molded C-H Thermoplas.



Greetings

from
American Steel & Wire Company

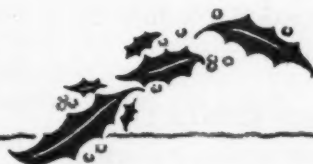
Again the Yuletide, with its inspirations of good cheer is with us—the New Year approaches—and we sincerely extend to you our very best wishes for a very

MERRY CHRISTMAS and a
HAPPY, PROSPEROUS
NINETEEN THIRTY-ONE

ELECTRICAL WIRES

Manufactured by
AMERICAN STEEL & WIRE COMPANY

Rubber Covered
Weatherproof
Bare Copper—Magnet
Annunciator and Office Wires
Lamp Cords—Trolley Wire
Automobile Cables
Submarine Cables
Park and Suburban Cables
Power Cables
Either Rubber, Cambric or
Paper Insulated



AMERICAN STEEL & WIRE COMPANY

Subsidiary of United States Steel Corporation

208 S. La Salle Street, Chicago

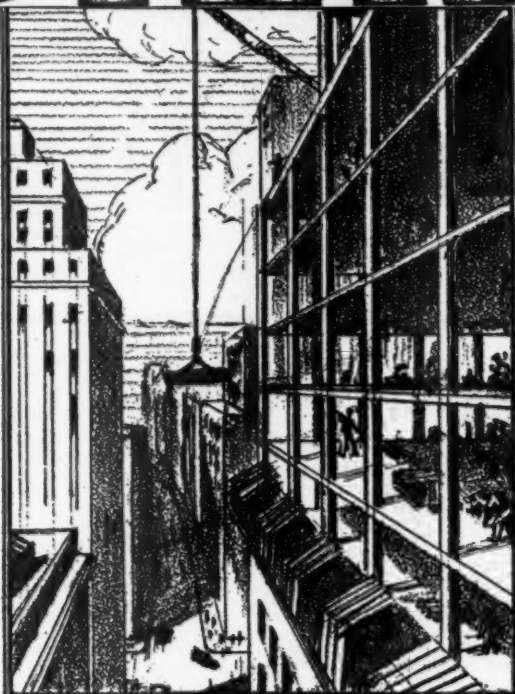
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Pacific Coast Distributors: Columbia Steel Company,
San Francisco Los Angeles Portland Seattle Honolulu



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MOHAWK



MADE TO BEND *Easily*

FOR PRACTICAL USE

AN installation of Mohawk Conduit always looks fine because it bends perfectly. It is practical conduit for practical electric contractors.

MOHAWK RIGID CONDUIT has the approval of contractors; it is made heavy; impervious to acids; durable as the building.—Tough Enamel; smooth, glossy finish. Pipe bends so

easily, you hardly realize it is steel.—And, clean even threads that make work a joy.

MOHAWK CONDUIT may be had in either Indian Black (enamel) or Indian White (galvanized).

The Mohawk "Book of facts" should be on every estimator's desk. Your copy is ready. Send for it.

MOHAWK CONDUIT CO., INC., COHOES, N. Y.

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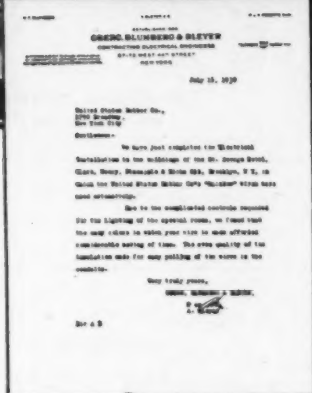
ELECTRICAL CONTRACTORS from COAST to COAST USE "U. S." RAINBOW WIRES



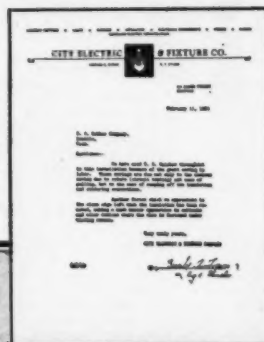
Hotel St. George
Brooklyn, N. Y.

Architect—Emory Roth

Electrical Contractor—
Oberg, Blumberg and
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Washington
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Washington.
Architect—Earl
Roberts.
Electrical Con-
tractor—City
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**50% EASIER
PULLING
CIRCUIT TESTING
IN 1/3 THE TIME**

ELECTRICAL Contractors from coast to coast find that "U. S." Rainbow Wires are saving them time and money and are producing better jobs. Ask your jobber to send you "U. S." Rainbow Wires for your next job.

"U. S." Rainbow Wires are made in eight standard colors and in sizes from 18 A. W. G. to 1,000,000 C. M.

**WE'LL GLADLY
SERVE YOU
THROUGH YOUR
JOBBER**



"U. S." RAINBOW WIRES

UNITED STATES RUBBER COMPANY, 1790 BROADWAY, N. Y.

The World's Largest Producer of Rubber

THREADED COMPOSITION BUSHINGS									
Size	3/8"	1/2"	5/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
Without Locknut.....	\$.05	\$.11	\$.12	\$.14	\$.16	\$.30	\$.45	\$.80	
With Locknut.....	.08	.14	.15	.18	.25	.45	.70	1.10	
Socket Bushings									
Black Composition.....	1/4"	1/2"	3/4"	1"					
For Sockets.....	\$.02	\$.02	\$.04	\$.08					

BOXES, FLOOR

NON-ADJUSTABLE TYPE				
"Full- man" robe" Steel Fullman City Mfg. Co. Co.	Rus- sell Stoll	Description	Price	
477 110	2590	Comp. Out. with Std. Rec. & Bell Nozzle	\$4.00	
490 100	2590	" " Less Std. Rec. with Stem Nozzle	3.50	
490 100	2590	Comp. Out. Less Std. Rec. less Nozzle	2.40	
491 .....	.....	Comp. Out. with 20A. Polarz. Rec. & Plug Noz.	4.90	
499 300	.....	Mid. et Out. with 10A. Recept. No Nozzle	2.25	
495 .....	.....	Square Out. Less Recept. with Bell Nozzle	4.30	
496 .....	.....	Square Out. With 15 Amp. Rec. & Bell Nozzle	5.40	
497 .....	.....	Sq. Out. With 25 A. Rec. & Large Bell Nozzle	8.60	

ADJUSTABLE TYPE				
400 120	2502	Complete-Shallow Box—Less Receptacle	\$4.30	
400 .....	.....	Complete-Deep Box—Less Receptacle	5.25	
401 130	.....	Complete-Shallow Box With Receptacle	5.35	
401 .....	.....	Complete-Deep Box With Receptacle	6.30	
420 .....	.....	Complete Large Size Box Without Receptacle	4.90	
421 .....	.....	Complete Large Size Box With Receptacle	5.95	

ADJUSTABLE GANG TYPE				
441 251	2511	Single Gang Less Recept. with 1/2" Cover Plate	\$ 5.35	
442 252	2512	Two " " " " " "	10.75	
443 253	2513	Three " " " " " "	16.10	
444 254	2514	Four " " " " " "	21.45	
445	2515	Five " " " " " "	26.80	
Extra for Brass Cover Plate and Receptacle.....			Per Gang	1.25

G. E. & T & B BOXES				
G. E.	T. & B.	Description	Price	
8000	8000	Utility Outlet Box Non-Adjustable.....	\$1.00	
8200	1700	Two Wire Fir. " " " "	4.00	
8220-40	1701-2	Three " " " " " "	5.50	
8300	1703	Extension " " " Telo or Signal.....	2.75	
8400	1730-60	Two Wire " " " Adj.—Deep or Shallow.....	6.25	
8420-40	1731-61-2	Three " " " " " "	7.25	
8500	1733-63	Telo. or Signal Floor Box Adj.—Deep or Shallow.....	5.00	

"BUSHED ELBOWS"—"BULB TEES"— FLOOR COUPLINGS				
Bushed Elbows Iron.....	1/2"	3/4"	1"	1 1/4"
"Bulb" Tees	\$0.60	\$0.80	\$1.15	\$3.45
Floor Coupling Brass.....	1.40	1.65	2.00	4.35

BOXES, CUTOUT

TYPE "A" STEEL SURFACE CUTOUT BOXES									
Black									
Width	Length	3"	4"	6"	Width	Length	3"	4"	6"
Side	Side	Deep	Deep	Deep	Side	Side	Deep	Deep	Deep
4 1/2	5	.55	.....	.....	12	30	.....	\$10.75	\$12.40
4 1/2	9	.65	.....	.....	15	15	.....	2.75	4.15
4 1/2	9 3/4	.65	.....	.....	15	18	.....	3.00	4.75
6	6	1.00	.85	\$1.20	15	24	.....	5.70	6.50
6	8	.85	1.00	1.40	15	30	.....	13.35	15.30
6	12	1.35	1.10	1.95	18	18	.....	4.75	5.40
6	8	1.35	1.05	1.70	18	24	.....	10.65	12.60
8	10	1.45	1.20	2.00	18	30	.....	12.20	13.00
8	12	1.80	1.40	2.25	18	36	.....	15.20	15.40
9	9	1.15	1.80	2.30	18	40	.....	17.80	19.40
10	12	1.40	2.15	2.60	24	24	.....	19.50	21.30
10	10	1.70	1.40	2.35	24	30	.....	19.10	20.80
10	12	1.95	1.70	2.65	24	36	.....	22.35	23.75
10	15	2.35	1.85	3.10	24	40	.....	24.30	26.60
10	18	2.70	3.00	3.60	24	44	.....	41.35	45.30
12	12	2.25	1.80	3.00	30	30	.....	27.20	29.65
12	15	2.40	2.10	3.50	30	36	.....	41.55	47.40
12	18	.....	2.50	4.00	30	42	.....	48.85	53.00
12	24	.....	4.40	5.40	30	48	.....	56.70	61.80

For Galvanized Boxes Add 50% to above prices.

BELLS & BUZZERS

Ansonia									
Name	No.	Description	Buzzer	2 1/2"	3"	4"	Cow or		
Ansonia	656	Safe. Coil Non Adjust.	\$.40	\$.15	.....	.....	Sleigh		
Ansonia	657	Dble. Coil Non Adjust.	.50	.55	.....	.....	
Ansonia	652	Dble. Coil Round Non	.....	.....	.....	.....
Wizard	659	Dble. Coil Non Adjust.	.55	.60	.....	.....	
Eureka	641	Dble. Coil Adjust. Class	.90	.95	.....	.....	
Acme	631	Dble. Coil Adjust. Class	.95	1.00	\$1.25	\$1.60	\$1.80		
Eureka	621	Dble. Wood Box Bell	1.35	1.40	1.60	1.80	2.10		
Monitor	658	Round Type Monitor	1.20	1.35	1.40	1.65	1.85		

BELLS AND BUZZERS—Continued

Ansonia—Continued

Name	No.	Description	Buzzer	2 1/2"	3"	4"	Cow or
Monitor	661	Round Type Monitor	.....	\$1.50	.....	.....	Sleigh
Wizard	660	Comb. Bell & Buzzer	\$1.25	1.25	\$1.35	.....
Wizard	655	Buzzer Oak Mat	1.70	.....	.....	.....
Wizard	666	Watch Case Buzzer Round	1.25	.....	.....	.....
Ansonia	663	Comb. Bell & Buzzer	1.00	1.00	1.10	.....

Edwards

Name	No.	Size	Description	Price
Nubel	735	2 1/4"	Two Coil Non-Adjust.—Gray Enam. Bell	\$.65
"	736	"	" " " " " Buzzer	.60
Dixie	720	2 1/4"	" " " " " Class C—Non-Adjust. Bell	.95
"	725	"	" " " " " Buzzer	.90
Combelle	737	2 1/4"	Two Coil Non-Adjust.—Gray Enam. Bell & Buzzer	1.15
Tubell	738	.....	Dble. Coil Non-Adjust.—Gray Enam. Two Bells	1.20
Cadet	710	2 1/4"	Two Coil—Class B—Adjust. Bell	1.00
"	715	"	" " " " " Buzzer	.95
"	712	"	" " " " " Bell	1.25
"	714	"	" " " " " Bell	1.60
"	"	"	" " " " " Cow or Sleigh	1.80
Buz-A-Bell	730	2 1/4"	Two Coil—Class C Comb. Bell & Buzzer	1.20
Monitor	156	3"	Monitor Bell—Nickel Plated Gong	1.50
Bronx	750	1 1/4"	Nickel Watch Case Buzzer	1.25

Edwards—Lungen

No. 13 Bells		Price
Size		
1"	.....	\$2.00
1 1/4"	.....	1.80
1 1/2"	.....	1.60
2"	.....	1.80
3"	.....	2.00
4"	.....	2.20
6"	.....	3.40
Cow or Sleigh	.....	2.25

No. 15 Buzzers

Size	No. 0	Price
1 1/4" x 1 1/4"	\$1.85
2 1/4" x 1 1/4"	1.60
2 1/4" x 1 1/4"	1.80
3" x 2"	2.00
3 1/4" x 2 1/4"	2.20

Partrick & Wilkins

Iron Box Bells

Small 2 1/4" Iron Box Bell Non-Adjust. Dble. Magnet	\$.40
Small 3" Iron Box Bell Non-Adjustable Double Magnet	.85
Fancy Gong Cow or Sleigh Non-Adjust. Dble. Magnet	1.65
King Monitor Bell	1.60
6" Large Iron Box Bell for Battery Current	6.50
8" " " " " " "	8.00

Buzzers

No. 1 Small Iron Box Buzzer Non-Adjust. Dble. Magnet	\$.40
Watch Case Buzzer Nickleled	1.10
Midget Buzzer Nickleled	1.90
Wood Box Buzzer	2.15
Flush Buzzer with Flush Plate	3.00

Wood Box Bells

Regular Type	Large Type
2 1/4" Regular.....	6" Regular.....
3" ".....	8" ".....
4" ".....	10" ".....
Standard Cow or Dinner.....	5" Dinner.....
3" Dinner.....	6" ".....
4" ".....	8" Cow.....
3" Cow.....	6" ".....
4" ".....	10.00

Stanley & Patterson

Name	No.	Description	Buzzer	2 1/2"	3"
Competition	400-1	Dble. Coil Non-Adjust.	\$.60	\$.65	.....
Eclipse	200-3	" " " " " "	.90	.95	\$1.00
XXX	211-18	" " " " " Adjust. B	.95	1.00	1.85
Mario	221-29	" " " " " A	1.65	1.70	.....
Eclipse	308	Comb. Bell & Buzzer	1.25	1.25	.....
Competition	402	" " " " " " "	1.00	1.00	.....
Midget	331-34	All Nickleled Bell	1.50	1.90	.....
P. R.	240	Watch Case Buzzer	1.25	.....	.....
P. R.	238	Monitor	.....	.....	1.50

Schwarze and Liberty

Single Coil Bell or Buzzer No. 311-32	Buzzer	2 1/2"	3"	4"	Tea
Two Coil Bell or Buzzer No. 311-321	.50	.50	.55	\$1.50	\$1.35
Combination Bell & Buzzer No. 311-333	.90	.90	.....	.....	.....
Flush Type Buzzer No. 315	1.25	.....	.....	.....	.....

SKELETON BELLS

Any Make

2 1/4"	3"	4"	5"	6"	8"	10"	12"
Faraday.....	\$5.70	\$6.00	\$7.00	\$9.40	\$10.00	\$25.00	\$31.00
Faraday Elks	5.25	5.50	6.60	7.75	8.75	14.25	27.50

Push Buttons, Etc.

Brackets for Insulators

PUSH BUTTONS, TREADS, SPRINGS

STANDARD PUSHES AND TREADS

Description	Ans.	Edw.	Fara.	P&W	Price
Round 1 1/4" and 1 1/2" Stamped Brass.....	506	603	SP51	29	\$0.20
Round 2 1/4" Stamped Brass.....	527	600	SP50	27	.25
Round 2 1/4" with Card Holder Stamped Brass.....	507	601	SP57	25	.40
Rectangular 4x2" Stamped Brass.....	604	SP54	55	.40	
Rectangular 3 1/4x1 1/2" Stamped Brass.....	605	SP53	50	.40	
Oval 2 1/4x1 1/2" Stamped Brass.....	606	SP55	50	.30	
Oval 4 1/2x2 1/2" Stamped Brass.....	609	SP56	50	.45	
Pear Push Buttons—Wood or Composition.....	505	67	5-9	3	.60
Pear Push Buttons—Metal, Nickel or Brass.....	68	MP8	59	.85	
Desk Buttons—1 1/2" Hole—Nickel.....	562	59	7A	4	.75
Desk Buttons—1 1/2" Hole—Nickel.....	63	.....	.....	4	.65
Desk Buttons—1 1/2" Hole—Nickel.....	D83	620	5A	4	.45
High Voltage 1 1/2" Hole—110 Volts.....	85	.....	855	2.40	
Table Clamp with Push Button.....	571	206	TC1	1.00	
Floor Pushes Combination Nickel.....	560	235	CFP2	.85	
Floor Treads—"Daisy" "Dixie".....	800	290	FT1	1.50	
Wood Push Buttons.....	.....	.....	.....	.20	

BAKELITE OR COMPOSITION PUSHES

Round Plain 1 1/4" Diam.....	\$0.30	Rectangular Plain 1 1/4x3 1/4".....	\$0.40
Octagon Fancy 1 1/4x1 1/4" Diam.....	.35	Rectangular Fancy 1 1/4x3 1/4".....	.60
Oct. Card Holder 2 1/4x2 1/4" Diam.....	.40	Rec. Double Card Holder.....	.85

DESK PUSHES—COMPOUND
With Buttons

Make and Description	1	2	3	4	5	6
Edw. #146—Bakelite Block.....	\$2.10	\$2.50	\$3.20	\$3.65	\$4.50	\$5.25
Edw. #197 Less Cord Bake.Bl.....	3.50	4.75	6.00	7.25	8.50	9.75
Edw. #197 with 6" Cord Bake.Bl.....	4.05	6.10	7.75	9.45	11.15	12.85
Edw. #190 Wood—Less Cord.....	4.00	5.35	6.60	8.10	9.40	10.80
Edw. #190 Wood with Cord.....	4.45	6.65	8.35	10.30	12.05	13.90
Fara. #4C Wood Less Cord.....	2.00	2.30	2.60	3.05	3.50	3.90
Fara. #2A Wood Less Cord.....	4.90	7.00	8.50	10.60	12.40	13.80
Fara. B.D.P. Bake. Less Cord.....	3.50	4.75	6.00	7.25	8.50	9.75
Fara M.D.P. All Metal Less Cord.....	6.00	11.00	16.00	21.00	.....	.....
P&W #4 Wood Less Cord.....	2.60	2.80	3.60	4.30	4.85	5.60
P&W #5 Wood Angle Less Cord.....	.....	.....	13.00	.....	13.95	.....
P&W #12 Wood Less Cord.....	3.30	4.25	5.45	.....	6.00	.....

DOOR AND WINDOW SPRINGS

Door Springs	Window Springs
Open Circuit Door Spring.....	Open Circuit Single.....
Closed Circuit Door Spring.....	Open Circuit Double.....
Open Circuit Make and Break.....	Close Circuit Single.....
Open Circuit Door Trip.....	Open Circuit Transom.....

OTHER PUSH BUTTONS

Ansonia			
Round Stamped	Price	Round Cast	Price
514 1 1/4" Loose Back.....	\$0.30	511 1 1/4" Loose Back.....	\$0.30
515 2 1/4" Loose Back.....	.40	512 2 1/4" Loose Back.....	1.00
579 1 1/4" Flush Push.....	1.00	508-10 2 1/4" Loose Back.....	1.00
E33 1 1/4" Flush Push.....	1.00	540 2 1/4" Loose Back.....	.60
		550 2 1/4" Loose Back.....	.85
		570 2 1/4" Loose Back.....	.75

Other Ansonia Push Buttons, Etc.

F-33 Stamped Flush Push.....	\$0.70	545 Oblong 2 Gang for Cards.....	\$1.85
G-33 Stamped Diamond Push.....	.70	545 Oblong 3 Gang for Cards.....	2.65
521 Stamped Push.....	.75	545 Oblong 4 Gang for Cards.....	3.65
528-534 Stamped Push.....	.95	546 Oblong 1 Gang.....	1.65
536-537 Stamped Push Loose Back.....	1.00	547 Oblong 2 Gang.....	1.50
538 Stamped Oblong Push.....	1.25	548 Oblong 1 Gang.....	.75
541 Oblong for Card.....	1.65	549 Oblong 1 Gang.....	1.20
544 Oblong for Card.....	1.20	578 Diamond Push.....	.75
Combination Floor Pushes Complete.....	573		2.50
700 1 Point Wood Base Switch.....			.45

Edwards

Round Desk Buttons	Oblong Push Buttons
621—1 1/2" Hole.....	602—2 Gang for Cards.....
622—1 1/2" Hole.....	607—Single for Cards.....
625—1 1/2" Hole.....	608—Single.....
1786—2 1/2" Watertight.....	650—Single Solid Cast Brass.....

Partrick & Wilkins

Round Push Buttons	
Stained Wood Push #2.....	\$0.15
Oak Wood Regular #1.....	.35
Oak Open, Closed and Dbl. Cont. #1.....	.65
Oak Triple Contact #1.....	.90
Cast Brass 1 1/2" Diam. #8.....	.55
Cast Brass 2 1/2" Diam. #9.....	.65

Oblong Pushes

16 Cast Brass 4 1/4x1 1/4" Screw Cap.....	\$1.55
31 Cast Brass 5x2 1/2" Screw Cap.....	2.15
44 Cast Brass 4x2" Screw Cap.....	1.40
708 Wrought Push and Speak 1 Pce.....	1.00
907 2 Button and Card Holder.....	2.15
908 3 Button and Card Holder.....	2.95
900 4 Button and Card Holder.....	4.55

Electrical Contracting, December, 1930

OTHER PUSH BUTTONS—Continued

Partrick & Wilkins

Desk Push Buttons

Car Push 1 1/2" Hole Black Center.....	\$0.45
Multiple 1 1/2" Hole Black Center.....	1.35
Pony 1 1/2" Hole Black Center.....	1.85

Pear Shape Pushes

Compound Maple 2 Button.....	\$2.00
Compound Maple 3 Button.....	3.00
Wood Rosettes for above.....	.40

MULTIPLE PUSH BUTTONS

Couch "Pushrites"

Number of Buttons	Plain Base Number	With Card Holders		Flush Brass Plate Type	
		Wood Base Type	Weighted Base	Number	Price
4	7900	\$ 3.35	7980	7940	\$ 5.00
6	740	4.60	789	.....	.....
8	7910	5.80	7990	7960	9.15
12	7921	8.80	79010	7960	13.30
16	7930	10.80	79020	7970	17.50
20	793	13.30	7902	797	21.60

COUCH UNMOUNTED PUSH BUTTONS "WORKRITES"

No. 97 for 1 1/2" Hole.....	\$0.50
Adaptor No. 0684 for same.....	.05

BRACKETS FOR INSULATORS

WOOD BRACKETS

	Each		Each
1 1/2" x 2" x 10".....	\$.08	1 1/2" x 2" x 12".....	\$.06
1 1/2" x 2" x 12".....	.08	2" x 2 1/4" x 12".....	.10
1 1/2" x 2 1/4" x 12".....	.08	2" x 2 1/2" x 12".....	.10
		2" x 3" x 12".....	.15

PINS

	Each		Each
Locust 1 1/4" x 8".....	\$.06	Locust 1 1/4" x 9".....	\$.10
Oak 1 1/4" x 8".....	.05	Oak 1 1/4" x 9".....	.08

HOUSE BRACKETS WITHOUT INSULATORS

Peirce

No.	Light Type Points	Price	No.	Heavy Type Points	Price	No.	Corner Type Points	Price
153	One	\$.25	154	One	\$.40	160	One	\$.30
253	Two	.55	254	Two	.80	242	Two	.55
353	Three	.90	354	Three	1.10	342	Three	.80

WIREHOLDERS WITH INSULATORS

Peirce

No.	Wires	Spacing	Price
1607	One	0"	\$.25
190	"	0"	.25
191	"	0"	.30
299	Two	6"	.55
296	"	9"	.55
394	Three	4 1/4"	.80
398	"	6"	.85

HOUSE RACKS WITH INSULATORS

Peirce

No.	Wires	Length	Space	Price
183	1	6 1/4"	0"	\$.40
286	2	12 1/4"	6"	.80
383	3	12 1/4"	3"	.95
386	3	18 1/4"	6"	1.20

SECONDARY RACKS WITH INSULATORS

Peirce

No.	Light Type Wires	Space	Price	No.	Heavy Type Wires	Space	Price
276	2	6"	\$.90	278	2	8"	\$1.30
376	3	6"	1.30	378	3	8"	2.15
1276	2	6"	.85	1278	2	8"	1.20
1376	3	6"	1.20	1378	3	8"	1.35
2768	2	8"	.90	.....	.....	.....	.....
3768	3	8"	1.30	1378	3	8"	2.00

INSULATORS ONLY FOR ABOVE BRACKETS

Peirce

355 Insulator.....	\$.18	1602 Insulator.....	\$.12
356 ".....	.25	1603 ".....	.10

Light Type			Heavy Type			Corner Type		
No.	Points	Price Each	No.	Points	Price Each	No.	Points	Price Each
108-10	1	\$.25	109-10	1	\$.45	111-10	1	\$.60
108-26	2	..55	123-6-7	1	1.40	111-50	1	..50
108-20	2	..60	109-26	2	..80
108-20	2	..60	109-29	2	..85	111-29	2	..80
108-36	3	..95	109-36	3	1.15	111-36	3	..85

No.	Light Type			No.	Heavy Type		
	Points	Length	Each		Points	Length	Each
104-10	1	5 1/2	\$.45	101-24	2	9 1/2	\$1.10
104-26	2	11 1/2	.90	101-28	3	13 1/2	1.65
104-33	3	11 1/2	1.00	101-34	3	15 1/2	1.75
104-36		18	1.25	101-38	4	21 1/2	2.40
				101-44	4	24 1/2	2.70
104-53	5	18	1.60	101-54	5	21 1/2	2.70
104	Insulator Only .12			101	Insulator Only .17		

No. 5000 Corner Chair....	\$.13	No. 5040 Break Arm Strap....	\$.14
No. 5020 Insulator.....	.18	No. 5051 " " " Bolt..	.20
No. 5021 U Bolts & Nuts..	.10	No. 5052 T Head Screw.....	.03

No.		No.		No.	
5211.....	\$.20	5311.....	\$.14	5411.....	\$.25
5211L.....	.22	5311L.....	.15	5411L.....	.23
5213.....	.25	5313.....	.20	5413.....	.30
5213L.....	.28	5313L.....	.22	5413L.....	.34

For One Wire		For Two Wires		For Three Wires	
No.	Each	No.	Each	No.	Each
No. 5011.....	\$.28	No. 5002.....	\$.60	No. 5003.....	\$.88
No. 5001.....	.25	No. 5012.....	.55	No. 5023.....	.80

Light Type				Heavy Type			
No.	Points	Length	Each	No.	Points	Length	Each
105-1X	1	"	\$.25				
105-1	1	6"	..	105-1	1	6"	\$.60
105-2	1	4 1/2"	..	105-10	1	10"	..
105-26	2	10 1/2"	..	105-26	2	11 1/2"	1.25
105-29	2	10 1/2"	..	105-29	2	14 1/2"	1.30
105-34	3	13 1/2"	..	105-36	3	17 1/2"	1.85
105-36	3	16 3/4"	..	105-36X	3	17 1/2"	1.05
105-38	3	18 1/2"	..				
105-39	3	18 1/2"	..	105-39	3	18 1/2"	1.10
105-40	3	18 1/2"	..				
105-41	3	18 1/2"	..				
105-42	3	18 1/2"	..				
105-43	3	18 1/2"	..				
105-44	3	18 1/2"	..				
105-45	3	18 1/2"	..				
105-46	3	18 1/2"	..				
105-47	3	18 1/2"	..				
105-48	3	18 1/2"	..				
105-49	3	18 1/2"	..				
105-50	3	18 1/2"	..				
105-51	3	18 1/2"	..				
105-52	3	18 1/2"	..				
105-53	3	18 1/2"	..				
105-54	3	18 1/2"	..				
105-55	3	18 1/2"	..				
105-56	3	18 1/2"	..				
105-57	3	18 1/2"	..				
105-58	3	18 1/2"	..				
105-59	3	18 1/2"	..				
105-60	3	18 1/2"	..				
105-61	3	18 1/2"	..				
105-62	3	18 1/2"	..				
105-63	3	18 1/2"	..				
105-64	3	18 1/2"	..				
105-65	3	18 1/2"	..				
105-66	3	18 1/2"	..				
105-67	3	18 1/2"	..				
105-68	3	18 1/2"	..				
105-69	3	18 1/2"	..				
105-70	3	18 1/2"	..				
105-71	3	18 1/2"	..				
105-72	3	18 1/2"	..				
105-73	3	18 1/2"	..				
105-74	3	18 1/2"	..				
105-75	3	18 1/2"	..				
105-76	3	18 1/2"	..				
105-77	3	18 1/2"	..				
105-78	3	18 1/2"	..				
105-79	3	18 1/2"	..				
105-80	3	18 1/2"	..				
105-81	3	18 1/2"	..				
105-82	3	18 1/2"	..				
105-83	3	18 1/2"	..				
105-84	3	18 1/2"	..				
105-85	3	18 1/2"	..				
105-86	3	18 1/2"	..				
105-87	3	18 1/2"	..				
105-88	3	18 1/2"	..				
105-89	3	18 1/2"	..				
105-90	3	18 1/2"					

		Length						
		3"	3 1/4"	4"	4 1/4"	5"	5 1/4"	6"
3/4"	Diam. Each..	\$.05	\$.05	\$.05	\$.06	\$.07	\$.07	\$.08
3/4"	" " " "	.08	.09	.09	.10	.10	.11	.12

Diam.		Length															
		3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"					
1/4"	Each.....	\$.05	\$.06	\$.07	\$.08	\$.08	\$.09	\$.10	\$.12	\$.12	\$.14	\$.15					
3/8"	do08	.09	.10	.11	.12	.13	.15	.18	.20	.21	.23					
1/2"	do12	.13	.14	.15	.16	.18	.20	.22	.25	.27	.30					
3/4"	do15	.16	.17	.19	.20	.25	.26	.29	.32	.35	.38					

		Diameter				
Length		$\frac{1}{8}$ "	$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "
Up to 1"	Long Per Dozen.					
1/4 to 1 1/2	"	\$.10	\$.10	\$.12	\$.15	\$.20
1 1/2 to 2 1/2	"	"	"	"	"	"
2 1/2 to 3 1/2	"	"	"	"	"	"
3 1/2 to 4 1/2	"	"	"	"	"	"
4 1/2 to 5 1/2	"	"	"	"	"	"
5 1/2 to 6 1/2	"	"	"	"	"	"
6 1/2 to 7 1/2	"	"	"	"	"	"
7 1/2 to 8 1/2	"	"	"	"	"	"
8 1/2 to 9 1/2	"	"	"	"	"	"
9 1/2 to 10 1/2	"	"	"	"	"	"
10 1/2 to 11 1/2	"	"	"	"	"	"
11 1/2 to 12 1/2	"	"	"	"	"	"
12 1/2 to 13 1/2	"	"	"	"	"	"
13 1/2 to 14 1/2	"	"	"	"	"	"
14 1/2 to 15 1/2	"	"	"	"	"	"
15 1/2 to 16 1/2	"	"	"	"	"	"
16 1/2 to 17 1/2	"	"	"	"	"	"
17 1/2 to 18 1/2	"	"	"	"	"	"
18 1/2 to 19 1/2	"	"	"	"	"	"
19 1/2 to 20 1/2	"	"	"	"	"	"
20 1/2 to 21 1/2	"	"	"	"	"	"
21 1/2 to 22 1/2	"	"	"	"	"	"
22 1/2 to 23 1/2	"	"	"	"	"	"
23 1/2 to 24 1/2	"	"	"	"	"	"
24 1/2 to 25 1/2	"	"	"	"	"	"
25 1/2 to 26 1/2	"	"	"	"	"	"
26 1/2 to 27 1/2	"	"	"	"	"	"
27 1/2 to 28 1/2	"	"	"	"	"	"
28 1/2 to 29 1/2	"	"	"	"	"	"
29 1/2 to 30 1/2	"	"	"	"	"	"
30 1/2 to 31 1/2	"	"	"	"	"	"
31 1/2 to 32 1/2	"	"	"	"	"	"
32 1/2 to 33 1/2	"	"	"	"	"	"
33 1/2 to 34 1/2	"	"	"	"	"	"
34 1/2 to 35 1/2	"	"	"	"	"	"
35 1/2 to 36 1/2	"	"	"	"	"	"
36 1/2 to 37 1/2	"	"	"	"	"	"
37 1/2 to 38 1/2	"	"	"	"	"	"
38 1/2 to 39 1/2	"	"	"	"	"	"
39 1/2 to 40 1/2	"	"	"	"	"	"
40 1/2 to 41 1/2	"	"	"	"	"	"
41 1/2 to 42 1/2	"	"	"	"	"	"
42 1/2 to 43 1/2	"	"	"	"	"	"
43 1/2 to 44 1/2	"	"	"	"	"	"
44 1/2 to 45 1/2	"	"	"	"	"	"
45 1/2 to 46 1/2	"	"	"	"	"	"
46 1/2 to 47 1/2	"	"	"	"	"	"
47 1/2 to 48 1/2	"	"	"	"	"	"
48 1/2 to 49 1/2	"	"	"	"	"	"
49 1/2 to 50 1/2	"	"	"	"	"	"
50 1/2 to 51 1/2	"	"	"	"	"	"
51 1/2 to 52 1/2	"	"	"	"	"	"
52 1/2 to 53 1/2	"	"	"	"	"	"
53 1/2 to 54 1/2	"	"	"	"	"	"
54 1/2 to 55 1/2	"	"	"	"	"	"
55 1/2 to 56 1/2	"	"	"	"	"	"
56 1/2 to 57 1/2	"	"	"	"	"	"
57 1/2 to 58 1/2	"	"	"	"	"	"
58 1/2 to 59 1/2	"	"	"	"	"	"
59 1/2 to 60 1/2	"	"	"	"	"	"
60 1/2 to 61 1/2	"	"	"	"	"	"
61 1/2 to 62 1/2	"	"	"	"	"	"

	Size—Diameter	2"	3"	3½"	4"	5"	6"
	Long Pries Each.....	\$.10	\$.10	\$.10	\$.10	Long	Long
1/8"	" " " "	-	-	\$.10	-	-	-
1/4"	" " " "	-	\$.10	-	\$.10	-	\$.12
3/8"	" " " "	-	\$.11	\$.12	\$.12	\$.13	-
1/2"	" " " "	-	-	\$.13	\$.14	\$.14	\$.15

NOTE: For Brass Toggle Bolts—2½ times above prices.

NOTE: For Brass Toggle Bolts—2½ times above prices.

3" x 4" Round	4 x 5" Round	5 x 6" Round
\$.12	\$.15	\$.18
Ceiling Button—P & S Porcelain No. 170—Each.....		
\$.12		
Switch Bases—See Snap Switches Page PL-19.		

CORDS, FIXTURE, LAMP AND HEATER

Single Lamp Cord	Type	Price Per Foot			
		No. 18	No. 16	No. 14	No. 12
Single Cotton Covered Cord—Light	F-64	\$.01	\$.02	\$.02½
Single Cotton Covered Cord—Heavy	F-32	.01½	.02	.03	\$.04
Single Artificial Silk Cord—Light...	F-64	.01½	.02½	.03
Single Artificial Silk Cord—Heavy...	F-32	.01½	.03	.04

Regular Lamp Cord		Type	No. 18	No. 16	No. 14	No. 12
Cotton Covered	Twisted Pair	C	\$.02 1/2	\$.03	\$.05	\$.07
"	" Parallel Pair	PO	.02 1/2	.04	.06
"	" Twisted Parallel Pair	PD	.03	.05
Artificial Silk	Twisted Pair	C	\$.02 1/2	.04	.06
"	" Parallel Pair	PO	.03	.05	.07

		Price Per Foot			
		No. 18	No. 16	No. 14	No. 12
Not Asbestos	Type				
Cotton Covered	Light Type 1/4" PS	\$.03	\$.04	\$.07	\$.12
	Heavy 1/2" P	.04	.05	.07	.13
Weatherproof	Light Type 1/4" PSWP	.03 1/2	.04
	Heavy Type 1/2" PWP	.04	.05	.07

				Price Per Foot				
				No. 18	No. 16	No. 14	No. 12	No. 10
Type	PS Light 2	Cond.	Port. Cord..	\$.08
"	P Heavy 2	"	"	.11	\$.13	\$.17	\$.22	\$.30
"	P " 3	"	"14	.22	.26	.36

	No. 18	No. 16	No. 14	No. 12	No. 10
SJ Junior 2 Conductor Black.....	\$.07	\$.09
" " " " Green.....	.12	.14
" " " " Black.....	.12	.14
S Type Heavy 2 Conductor Black..	.11	.15	\$.17	\$.22	\$.28
" " " " " " " "	.13	.16	.22	.26	.35
" " " " " " " "	.15	.19	.27	.35	.44
" " " " Sgle. Cond. Black... ..	.07	.08	.09	.10	.12

Asbestos Covered	Price Per Foot			
	No. 18	No. 17	No. 16	No. 14 No. 12
Stand. Twisted or Wound Asbest. 1/4	\$.05	\$.05	\$.06	\$.08 \$.10
American Beauty Heater Cord Super Flexible.....		.09		.12 .21
Rockbestos Heater Cord.....	.07	.07 1/4	.08	.10 .20
Universal No. 9092 Super Flexible.....		.09	.08	

	No. 18	No. 17	No. 16	No. 14	No. 12
"Deltabeston" Heater Cord					
Type A Asbestos Braid overall Locco Cab Cord	\$.09	\$.10	\$.11	\$.14
" C Cotton Braided overalls.....	.07	.08	.08	.10
" D " " " as cab cord.....	.07	.09
" E Cotton on ex. Cond. & over both.....	.08	.10	.09	.11

NOTE—For Armored Cords See Page PL-9.
 " Extension Cords See Page PL-10.
 " Fixture Wire See Pages PL-26 & 27.
 " Bell Wire See Page PL-27.

Description	Type	Price Per Foot			
		No. 18	No. 16	No. 14	No. 12 No. 10
x Brewery Cord.....	CB	\$.03	\$.04	\$.06
x Canvasite Cord.....	CP	.0414	.05	.07
x Deck Cable.....	FWP	.07	.08	.10
x Packinghouse.....	FKWP	.05	.06	.08
x Stage & Theatre Cable.....	T	.05	.06	.08	\$.14 \$.16
Type "K".....	K	.05	.06	.08

Type "K" replaced all of the above types except packinghouse cable.

Note: These prices are based on less than coil lot trade prices.

	2	3	4	5	8	10	14	18
Number of Conductors	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.
Price Per Foot.....	\$.08	\$.18	\$.20	\$.21	\$.25	\$.35	\$.65	\$.88

Note—For Armored Lamp Cord See Page PL-9.

Note—For Armored Lamp Cord See Page PL-9.

CORD & WIRE CONNECTORS

SMALL FIXTURE & WIRE CONNECTORS

Insulated Solderless Wire or Fixture Connectors Similar to "Ideal"
"Marr" "No Torch" "Simplex" "Wirelets" "Wiremold" "Wirenuts" Etc.—each \$.10
Non-Insulated Solderless Wire Connectors—2 Screw—All Metal..... \$.10

SET SCREW CONNECTORS

		Round Brass					
Wire Size		No. 12-14	No. 10	No. 8	No. 6	No. 4	No. 2
Divided Wall—2 Screws.....		\$.06	\$.08	\$.09	\$.10	\$.14	
Hole Thru 4 ".....		.11	.16	.12	.13	.18	
Hole Thru 2 ".....				.13	.15	.17	
Hole Thru 4 ".....						.20	
Wire Size		No. 2	No. 1/0	No. 2/0	No. 3/0	No. 4/0	
Divided Wall—2 Screws.....		\$.15					
Hole Thru 4 ".....		.20	\$.26	\$.32	\$.50	\$.80	
Hole Thru 2 ".....		.20	.24	.30			
Hole Thru 4 ".....		.22	.28	.30	.45	.60	

SOLDERLESS CONNECTORS

Dossert or Penn-Union

Size Cond.....	No. 3 to 1	No. 1/0	No. 2/0	No. 3/0	No. 4/0	No. 500,000	No. 400,000	No. 300,000	No. 250,000	No. 150,000	No. 100,000	No. 50,000
2 Way L's.....	\$0.75	\$0.80	\$1.00	\$1.20	\$1.40	\$1.65	\$1.90	\$2.50	\$2.05			
Cable Taps.....	1.05	1.20	1.40	1.75	2.10	2.40	2.85	3.75	4.65			
3 Ways & Y's.....	1.05	1.20	1.40	1.75	2.10	2.40	2.85	3.75	4.65			
Lugs FB Ang.....	.55	.60	.70	.90	1.10	1.20	1.40	1.85	2.40			

CORD & MOTOR CONNECTORS

		Complete		Body Only		Cap Only	
		No.	Price	No.	Price	No.	Price
Arrow							
Midget Comp.	8238		\$.50				
Arrotex	8239		.75				
Motor Conn.	RP-8221		.55	8221	.45	RP	\$.12
"	RL-8221		.60	8221	.45	RL	.20
"	RA-8222		.55	8222	.45	RA	.13
"	RM-8222		.65	8222	.45	RM	.25
"	TM-8222		.70	8222	.45	TM	.25
"	RH-8224		.90	8224	.60	RH	.35
"	RG-8281		.90	8281	.60	RG	.35
"	8334 & 35		.90				
Bryant							
Motor Midget	KR-130		.60	130	.45	KR	.20
Conn.	KG-103		.70	103	.45	KG	.25
"	KT-130		.55	130	.45	KT	.15
GE							
Cord Connector	1346-1347		.90	1647	.45	6146	.50
Hubbell							
Cord Connector	5894		.90	5574	.55	5896	.30
"	6116		.70	6118	.55	5964	.15
"	6179		.75	6630	.55	6631	.20
"	6180		.65	6630	.55	6181	.10
"	5518		.80	5574	.55	5420	.25
"	7083		1.35	7084	.85	7056	.55
"	7090		1.80	7091	1.10	7092	.75
"	6408		1.25	6409	.85	6149	.45
Weber							
Cord Connector	2274		.60	.74	.45	2200	.20
Wirt							
Cord Connector	.56		.55				

NOTE: For Attachment Plugs and other caps—See Pages PL-16 & PL-17

E-SUNDRIES

EXTENSION CORDS—MADE UP

		With Plug & Socket, but Guards-Lamps & Handles Extra		With Reinforced Cord and Key Socket		With Artificial Silk Cord and Key Socket	
Length in Feet		With Lamp Cord and Key Socket No. 18	Key Socket No. 18	Key Socket No. 16	Key Socket No. 18	Key Socket No. 16	Key Socket No. 18
4 Foot.....		\$.75	\$.80	\$.85	\$.80	\$.85	
6 ".....		.80	.90	.95	.90	.95	
8 ".....		.85	1.00	1.05	1.00	1.05	
10 ".....		.90	1.10	1.20	1.10	1.20	
12 ".....		.95	1.20	1.30	1.20	1.30	
14 ".....		1.00	1.30	1.45	1.30	1.45	
16 ".....		1.05	1.40	1.55	1.40	1.55	
18 ".....		1.10	1.50	1.65	1.50	1.65	
20 ".....		1.15	1.60	1.75	1.60	1.75	
22 ".....		1.20	1.65	1.85	1.65	1.85	
24 ".....		1.25	1.75	1.95	1.75	1.95	
Length in Feet		With All Rubber Cord and Weatherproof Socket					
		Light		Heavy			
		No. 18	No. 16	No. 18	No. 16		
4 Foot.....		\$1.00	\$1.10	\$1.15	\$1.25		
6 ".....		1.20	1.30	1.40	1.50		
8 ".....		1.35	1.50	1.65	1.75		
10 ".....		1.50	1.70	1.90	2.00		
12 ".....		1.75	1.90	2.15	2.25		
14 ".....		1.90	2.10	2.40	2.50		
16 ".....		2.10	2.30	2.65	2.75		
18 ".....		2.25	2.50	2.90	3.00		
20 ".....		2.40	2.70	3.15	3.25		
22 ".....		2.65	2.90	3.40	3.50		
24 ".....		2.80	3.10	3.65	3.75		

ELBOWS & BENDS

For Rigid Conduit

		Size				
		1/2"	3/4"	1"	1 1/4"	1 1/2"
Black.....		\$.16	\$.21	\$.32	\$.41	\$.54
Galv.....		.19	.24	.37	.46	.62
		Size				
		2"	2 1/2"	3"	3 1/2"	4"
Black.....		\$.88	\$1.45	\$3.70	\$8.10	\$9.40
Galv.....		1.00	1.65	4.25	9.30	10.75

EXPANSION SHIELDS & ANCHORS

(Ackerman-Johnson—Dryvin—Star—Diamond—Packtite or Similar)

		Screws Not Included		Hammer Drive Anchors With Nail	
Expansive Screw Anchors or Caulking		Size Screw or Bolt	Price	Size of Shield	Price
6-32 Screw.....		1/4"x1 1/4"	\$0.06	Shield.....	\$0.05
8-32 ".....		3/8"x1 1/4"	.07		.06
10-24 ".....		1/2"x1 1/4"	.08		.07
12-24 ".....		5/8"x1 1/4"	.10		.08
1-4x20 Bolt.....		1/2"x1 1/4"	.12		.09
5-16x13 ".....		3/8"x1 1/4"	.15		.10
3-8x16 ".....		1/2"x1 1/4"	.18		.12
7-16x14 ".....		5/8"x2 1/4"	.20		.14
1-2x13 ".....		3/8"x3 1/4"	.20		.16
5-8x13 ".....		1/2"x3 1/4"	.30		.20
		3/8"x3 1/4"			.22
		1/2"x3 1/4"			.25

Multi-Size Screw Anchors

		Screw Size			
Length of Anchor.....		5 to 10	8 to 14	16 to 20	16 to 20
Price Without Screw.....		1/4"	1"	1 1/2"	1 1/2"
		\$0.04	\$0.05	\$0.06	\$0.08

LAG SCREW ANCHORS (Diamond or Similar)

		Screw Size			
Takes Lag Screw.....		1/4"	3/8"	1/2"	5/8"
Price Without Lag Screw.....		\$.15	\$.15	\$.25	\$.35
		1/4"	3/8"	1/2"	5/8"
		\$.40	\$.50	\$.90	\$1.00

FUSES

PLUG FUSES

Standard Plug Fuses—Any Make—\$.07 each or 5 for \$.25
(Some Manufacturers put these fuses up 4 in a box, in which case they should be retailed at 4 for \$.25.)

ENCLOSED FUSES, NON-RENEWABLE

		Non-Indicating		Indicating	
		Price Each		Price Each	
Amps.		250 Volts	600 Volts	250 Volts	600 Volts
1 to 30.....		Fuse \$.10	Fuse \$.30	Fuse \$.20	Fuse \$.40
35 to 60.....		.20	.40	.35	.65
70 to 100.....		.60	1.10	.95	1.75
110 to 200.....		1.20	1.85	1.85	2.90
225 to 400.....		2.15	4.10	3.35	6.35
450 to 600.....		4.10	6.00	6.35	9.25
650 to 800.....		8.95	11.00	13.85	17.35

RENEWABLE FUSES

		Fuses		Links	
Amps.		250 Volts	600 Volts	250 Volts	600 Volts
1 to 30.....		\$.50	\$ 1.10	\$.08	\$.05
35 to 60.....		1.00	1.25	.08	.06
65 to 100.....		2.00	3.00	.10	.15
110 to 200.....		4.00	5.00	.15	.18
225 to 400.....		7.50	11.00	.30	.30
450 to 600.....		11.00	16.00	.60	.60

FUSE WIRE

		Size in Amps.....			
		1/4"	3/8"	1"	2"
Price Per Pound.....		\$65.00	\$6.00	\$3.60	\$2.20
Price Per Foot.....		.01	.01	.01	.01
		Size in Amps.....			
		3	5	6	10
Price Per Pound.....		\$1.00	\$1.50	\$1.50	\$1.25
Price Per Foot.....		.01	.01 1/2	.02	.02 1/2
		Size in Amps.....			
		20	25	30	40
Price Per Pound.....		\$1.00	\$1.00	\$1.00	\$1.00
Price Per Foot.....		.04	.05	.07	.08
		Size in Amps.....			
		60	70	80	90
Price Per Pound.....		\$1.00	\$1.00	\$1.00	\$1.00
Price Per Foot.....		.15	.20	.22	.24

Fuse Strip Any Amperage....\$1.00 per lb.

OPEN LINK FUSES

Small Wire Type

		Size in Amps.....		
		1 to 30	35 to 60	65 to 100
Numbers.....		00-0-1-2-3	2-3-5	5
Price Each.....		\$.10	\$.14	\$.20

Large Strip Type

		Size in Amps.....		
		25-100	110-200	225-400
Numbers.....		7	7 to 16	10 to 16
Price Each.....		\$.20	\$.30	\$.60
		Size in Amps.....		
		425-600	600-800	800-1800
Numbers.....		10 to 16	28	40
Price Each.....		\$1.00	\$1.75	\$6.55

STAMPED SHEET METAL LINK FUSES

		Type of Link.....			
		B	C	D	E-F-H-I-L-M
C to C Distance.....		1 1/4"	2 1/4"	2 1/4"	See Catalog
Price Each.....		\$.11	\$.11	\$.16	\$.30

STANDARD TYPES, COVERS EXTRA
"Condulets" "Taplets" "Unilets" "Electrolets" "V. V."
"Adaptilets" Etc.

	Form 7	2"	2 1/4"	3"	3 1/2"	4"
A		\$2.32	\$5.46	\$ 6.50	\$10.60	\$11.70
B		3.65	5.46	7.80	9.10	16.65
C		3.40	6.24	8.10	11.70	16.30
CO-COV		4.45	5.46	10.27	18.35	17.95
E		3.00	5.46	6.50	10.00	11.70
F						
	Form 7	7.00	10.66	13.26	23.53	32.50
LB-LF-LL-LR-LBB		3.50	6.50	8.45	13.65	15.60
LFB-LFB-LRB		3.50	6.50	8.45	13.65	15.60
LBL-LBR-LW		3.72	8.52	....	....	....
TA All One Size		3.58	6.50	0.75	14.30	16.90
TE All One Size		6.53	....	....	....	....
TB-TL-TR		3.58	6.50	0.75	14.30	16.90
U-UB		4.20	7.80	10.15	16.35	18.75
X All One Size		4.90	7.80	13.00	16.90	20.80
Gaskets		.35	.52	.52	.65	.65
Reducers		.70	1.30	1.76	2.60	3.54
Connectors		3.01	....	....	....	....

For Above

			1½"	1"	¾"	1½"
Porcelain Covers with Holes.....		\$.14	\$.21	\$.35	\$.48	\$.65
Composition " .....		.28	.42	.70	1.40	1.50
" " Blank.....		.42	.56	.84	1.54	1.64
Porcelain " For Drop Cord.....		.40	.56	..	..	..
" " Weatherproof.....		.22	.35	..	..	..
Metal Covers Blank Sheet Steel.....		.12	.16	.33	..	..
" " Cast Iron.....		.21	.31	.49	.70	.84
" " with ¼ Nipple.....		.28	.35	.59	..	..
" " ½ ".....		.33	.40	.54	..	..
" " ¾ ".....		.42	.56	..	..	..
		1½"	2"	2½"	3"	3½"
Porcelain Covers with Holes.....		\$.67	\$.84	\$ 1.12	\$ 1.40	\$ 1.70
Composition "		1.55	1.68	..	..	..
" " Blank.....		1.68	1.90	4.46	6.31	6.31
Porcelain " For Drop Cord.....		..	..	..	..	..
" " Weatherproof.....		..	..	..	..	..
Metal Covers Blank Sheet Steel.....		.63	.79	1.05	1.17	1.17
" " Cast Iron.....		.98	1.26	1.61	1.70	1.70
" " with ¼ Nipple.....		..	..	..	..	..
" " ½ ".....		..	..	..	..	..
" " ¾ ".....		..	..	..	..	..

For Above

Pole Receptacles				\$ ¹ / ₂ "	\$ ³ / ₄ "	\$ ¹ / ₂ "
Plug Receptacles	10 Amp.	2 Pole	250 Watt.	\$.56	\$.63	\$.71
"	15 "	2 "	125 "		.63	
"	20 "	2 "	250 "	.77	.84	.90
"	10 "	3 "	250 "	.84		
"	15 "	3 "	125 "		.91	
"	20 "	3 "	250 "		1.12	
Lamp Receptacle	600 Watt with Shade Holder.			.42	.49	.58
Cord Rosette						

Shallow Type Without Covers, Any Make

No. Gangs	No. Pipe Outlets	Series	3/4"	3/4"	1"
Single Gang	One	FS-FSA	\$.91	\$1.08	\$1.15
"	Two	FS-L-FSR- FSL-FSS-FSAA	1.05	1.26	1.50
"	Three	FSCA-FSCC- FSCF-FST	1.40	1.75	2.00
"	Four	FSX-FSCD	1.68	2.10	2.30
Two Gang	One	FS-FSA	1.68	1.82	1.90
"	Two	FSC-FSS	1.82	1.96	2.10
"	Three	FSD	2.03	2.17	2.30
2 Gang Tandem	One	FS	2.31	2.45	2.50
"	Two	FSC	2.45	2.50	2.70
Three Gang	One	FS-FSA	.....	2.52	2.70
"	Two	FSC	.....	2.66	2.80
"	Four	FSD	2.73	3.01	3.30
Four Gang	One	FS-FSA	.....	3.05	3.30
"	Two	FSC-FSSE	.....	3.29	3.50
"	Five	FSD	3.44	4.00	4.30

Description

	Description	Single Gang	2 Gang	3 Gang	4 Gang
Metal Cover for Flush Push Button Tumbler or Rotary Switches.....		\$.21	.42	.63	.84
Metal Cast Covers Guarded for Switches.....		.50	.91	1.40	1.98
" " Covers for Single Flush Receptacles.....		.35	.70		
" " " Duplex " " " " " "		.44	.84		
" " " Single " " Lift Cover.....		.54	1.08		
" " " with ½ Brass Nipple.....		.56			
" " " " " " " " " " " " " " " "		.63			
" " " For Pilot Lamp Rec. with Jewel.....		1.40			
Iron Vaporproof with Operating Mechanism.....		2.45	4.20		
" " Brass " " " " " " " " " " " " " " " "		3.50	5.05		
" " Black Coated Sheet Steel.....		.14	.26		
" " " Cast.....		.35	.70	1.05	1.40
Porcelain Cover with Holes.....		.28			

2	Gang for One Switch and one Spig. or Duplex Receptacle.....	\$.70
2	" " " " Bull's Eye with Jewel	1.75
2	" " " " One lift cover Receptacle	1.05

NOTE: Although our prices on conduit fittings apply to all makes we use
Crouse-Hinds' numbers and lists for convenience.

Type

Type Crouse Hinds or Similar	5 Amp.			10 Amp.		
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
G.	\$.66	\$.70	\$1.05	\$.70	\$.91	\$1.19
GL	.63	.77	1.12	.77	.98	1.25
GA-GLA-GT.	.84	.98	1.33	.98	1.19	1.60
GTA-GX-GXA.	1.05	1.19	1.68	1.19	1.40	1.82
HL	.42	.56	.91	.56	.77	1.05
HA.	.49	.63	.98	.63	.84	1.12
HG.	.55	.70	1.05	.70	.91	1.19
HHC.	.84	.98	1.33	.98	1.19	1.60
HLC.	.63	.77	1.12	.77	.98	1.25

Type Crouse Hinds or Similar	30 Amp.		1"
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	
G.	\$.90	\$1.05	\$1.40
GL	1.05	1.19	1.61
GA-GLA-GT.	1.26	1.40	1.82
GTA-GX-GXA.	1.60	1.68	2.24
HL	.84	.91	1.26
HA.	.91	.98	1.40
HG.	.98	1.05	1.40
HHC.	1.26	1.40	1.82
HLC.	1.05	1.19	1.61

Type

	Crouse Hinds or Similar			5 Amp.			10 Amp.		
	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"
G.....	\$.77	\$.91	\$1.26	\$.91	\$1.12	\$1.40	1.26	1.50	1.80
GL.....	.84	.98	1.33	.98	1.19	1.50	1.50	1.75	2.00
GA-GLA-GT.....	1.05	1.19	1.54	1.19	1.19	1.63	1.63	1.88	2.13
GTA-GX.....	1.26	1.40	1.89	1.40	1.61	2.03	2.03	2.28	2.53
GXA.....	1.80	1.71	2.17	1.71	1.89	2.31	2.31	2.56	2.81
H.....	.84	.77	1.12	.77	.98	1.26	1.26	1.51	1.76
HA.....	.70	.84	1.19	.84	1.05	1.33	1.33	1.58	1.83
HH.....	.77	.91	1.26	.91	1.12	1.40	1.40	1.65	1.90
HHC.....	1.05	1.19	1.54	1.19	1.40	1.68	1.68	1.93	2.18
HLA.....	.84	.98	1.33	.98	1.19	1.50	1.50	1.75	2.00

	Type Crouse Hinds or Similar			20 Amp.		
	1/2"	3/4"	1"	1/2"	3/4"	1"
G.....	\$1.26	\$1.33	\$1.65	1.65	1.88	2.13
GL.....	1.33	1.50	1.88	1.88	2.13	2.38
GA-GLA-GT.....	1.54	1.68	2.13	2.13	2.38	2.63
GTA-GX.....	1.75	1.96	2.53	2.53	2.78	3.03
GXA.....	1.96	2.24	2.80	2.80	3.03	3.28
H.....	1.12	1.19	1.64	1.64	1.71	2.16
HA.....	1.19	1.26	1.68	1.68	1.75	2.20
HH.....	1.26	1.33	1.72	1.72	1.79	2.24
HHC.....	1.54	1.68	2.10	2.10	2.24	2.38
HLA.....	1.33	1.50	1.88	1.88	2.03	2.28

Description	For G & H Fittings Without Adjustable Bar	For G & H Fittings With Adjustable Bar
-------------	---	--

	5 Amp.	10 Amp.	20 Amp.	5 & 10 Amp.	20 Amp.
Porcelain Cover with Wire Holes.....	\$.28	\$.35	\$.56	\$.21	\$.50
Blank Sheet Steel Cover.....	.21	.28	.35	.14	.35
" " Cast .....	.35	.42	.56	.28	.60
Sheet Steel with 1/8" Brass Nipple.....	.42	.49	.56	.35	.50
" " " 3/16" .....	.50	.56	.63	.42	.56
" " " 1/2" .....	.56	.63	.70	.50	.63
Receptacle Covers No Shadeholder..	.70	.70			
	1.12				

Lamp Receptacles one piece with or without Shadeholder Groove.....	\$.35
" " two " " " "	.70
" " " " without " "	.63
Cord Rosette Porcelain.....	.56
" Composition70

	1"	1 1/2"	2"
J-JB-JU.....	\$.84	\$1.05	\$1.50
LA-JB-JU.....	.98	1.19	1.61
LA.....	1.19	1.33	1.50
LA.....	1.33	1.50	1.61
LA.....	1.50	1.61	1.81
LA.....	.91		1.33
KA-KB-KC-KD.....	.84	1.06	1.50

ONE HAND
FOR A VISE
ONE KNEE
FOR A BENCH



STEELTUBES [E.M.T.]* takes an almost unbelievable amount of footwork out of the wiring job.

If the bench isn't handy, you can cut it the way the illustration shows. Try it! No need to measure, climb down the ladder, cut to length and climb up again. The wiremen can saw it easily without coming down.

Steeltubes is light . . . easy to handle . . . easy to bend . . . no threading. Steeltubes Connectors fit all standard fittings. The New Steeltubes Fittings give you a water-tight, vapor-proof job.

Electrical Division
STEEL AND TUBES, INC.
Cleveland, Ohio
(A Unit of Republic Steel Corp.)

[*STEELTUBES Electrical Metallic Tubing is threadless, strong, light and easy to handle. Costs less to buy. Saves time and money on the job.]



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STEELTUBES carries the Underwriters' Label, and is approved and listed as Standard by the Associated Factory Mutual.

Steeltubes
THREADLESS THIN WALL CONDUIT

Appleton Unilets in Famous Buildings



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Malleable iron gives Appleton No-Thread Unilets great strength with lighter weight, there is maximum wiring space inside, and the cadmium coating insures the greatest rust resistance.

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5 Reasons Why You Should Look Over This BRYANT DUPLEX FLUSH RECEPTACLE

1. Body is of Brown Bakelite ◀ ◀ ◀ ◀ ◀
2. Bosses have "Easy-Finding" Ribs ◀ ◀ ◀ ◀
3. Depth is only 23/32 of an inch ◀ ◀ ◀ ◀ ◀
4. Yoke is of a semi-flexible type which facilitates installation and adjustment in the box, but without sacrificing the rigidity of the receptacle after the installation has been completed ◀ ◀ ◀ ◀
5. Two extra large—No. 8—Binding Screws are provided in each Side Wiring Terminal ◀ ◀ ◀ ◀ ◀

This last feature makes of No. 4832 a connecting block as well as a convenience outlet. This receptacle can also be furnished, on special order, with plaster ears integral with the yoke. When so desired, specify No. 4832-PE.

See complete description at the right.

No. 4832

Brown Bakelite Duplex Flush Receptacle. Each outlet is approved for 15 amperes, 125 volts; 10 amperes, 250 volts. Base is $2\frac{1}{32}$ in. x $1\frac{1}{2}$ in.; depth $\frac{23}{32}$ in. Supporting screw spacing is $3\frac{3}{32}$ in. Plate mounting screw is grounded to the yoke. Each Side Wiring Terminal has two No. 8 Binding Screws. Standard Package, 100; Carton, 10; Standard Package Weight, 23 lbs.

E12

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MANUFACTURERS OF "SUPERIOR WIRING DEVICES" SINCE 1888—MANUFACTURERS OF HEMCO PRODUCTS

THEY KEEP A-RUNNING



1/4 Horse Power Century Type SP Split Phase Induction Motor

PROTECTED

• AGAINST DAMPNESS, DUST AND DIRT

The vital parts of the motor are protected from falling material or dirt and from dripping water by the mechanical design.

Their sturdy construction and clean cut appearance suggest ruggedness in the machines on which they are mounted.

Century Motors build business because "They Keep a-Running."

Built in $\frac{1}{8}$, $\frac{1}{6}$ and $\frac{1}{4}$ horse power sizes.

CENTURY ELECTRIC COMPANY

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40 U. S. and Canadian Stock Points and More Than 75 Outside Thereof

SINGLE PHASE,
THREE PHASE,
AND DIRECT
CURRENT MOTORS

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MOTORS

MOTOR GENERA-
TOR SETS, ROTARY
CONVERTORS, FANS
AND VENTILATORS

FOR MORE THAN 26 YEARS AT ST. LOUIS SP-1-1/4

Fittings, Conduit

Lamp Receptacle S. H. Groove.....	8.63
No S. H. Groove.....	.56
Plug Receptacle 10 & 15 Amp.....	.70
" 20 ".....	.91
" 10 & 15 3-wire.....	.08
Clark Rosette.....	.49
Bond Cast Cover.....	.42

Crouse-Hinds or Similar

Prices include Globe & Guard

		Form 75		
		16"	14"	1"
V-VA & VDA as above	.....	\$5.85	\$3.92	\$0.00
VC & VL	.....	5.98	6.11	6.24
VT-VD & VE	.....	6.17	6.30	6.56
VX	.....	6.30	6.53	6.76
VF	.....	6.37	6.50	
VD & VJ	.....	6.70	6.87	7.00

		Form 200		
		16"	14"	1"
V-VA & VDA as above	.....	\$7.02	\$7.00	\$7.16
VC & VL	.....	7.18	7.28	7.35
VT-VD & VE	.....	7.25	7.50	7.63
VX	.....	7.41	7.57	7.87
VF	.....	7.47	7.60	
VD & VJ	.....	7.67	7.80	7.93

	Form	Form
	75	200
Globes only, clear glass.....	\$1.12	\$1.12
" " opal.....	1.54	2.38
" " green.....	2.52	3.80
" " ruby.....	3.30	4.06
Guards Cast Aluminum.....	2.52	3.15
Half Shades.....	1.68	2.45
Receptacle with Gasket.....	.56	.56
Reflector Holders Cast Aluminum.....	.70	.91
Adaptor.....	1.05	1.26

GS VAPORPROOF FIXTURES
(Page 56, Crouse-Hinds Cat. 2200 or Similar)

(See 56, Crouse Hinds Cat. 2200 or Similar)									
Pendant or Bracket Fixture with Recep. Globe and Guard Form	75....	\$7.93							
	200....	8.84							

STANDARD TYPES

"Kondu" Crouse-Hinds "Appleton" or Similar

Types	Without Covers	1½"	3½"	1"	1½"
A.		\$.46	\$.62	\$.84	\$1.26
B.		.53	.70	.95	1.47
BE		.95	1.23	1.79	2.74
C.		.74	.94	1.33	2.03
CB.		1.14	1.86	2.80	4.26
D.		.74	.94	1.29	2.03
E.		.53	.67	.94	1.48
LB-LF-LL-LR.		.81	.98	1.40	2.17
SE.		.81	1.09	1.71	2.66
T-TL-TR.		1.04	1.34	1.85	2.80
TB.		1.17	1.83	2.82	4.26
U & UB.		1.91	1.12	1.54	2.52
X.		1.33	1.82	2.45	3.43
XB.		2.03	2.52	3.29	.....
LBL-LBR-LU.		1.26	1.68	2.31	.....
		1½"	2"	2½"	3"
A.		\$1.61	\$3.15	\$ 6.65	\$ 8.10
B.		1.96	3.85	6.65	8.10
BE		6.34	6.30	11.70	13.30
C.		2.66	5.11	8.55	11.15
CB.		3.85	6.16	9.90	14.30
D.		2.66	5.11	8.55	11.15
E.		1.96	3.85	6.65	8.00
LB-LF-LL-LR.		2.94	5.18	8.80	11.50
SE.		3.99	7.00	11.85	14.85
T-TL-TR.		3.85	6.16	9.90	14.40
TB.		5.18	9.00	.....	.....
U & UB.		2.29	6.00	10.10	13.20
X.		4.48	8.33	12.35	19.15
XB.	

	1 1/2"	2"	3"	4"
H Couplings.....	\$.32	\$.48	\$.83	\$1.14
KO Box Connector.....	..20	..29	..67	1.34
NO.....	..24	..31	..56	..84
S&A Cable Connector.....	..13	..17	..24	..35
SLP Short Elbow.....	..39	..52	..83	1.00
KOL Box Connector.....	..43	..58	1.54	1.54
KOR Reducer.....	..58	..63
H Couplings.....	\$1.54	\$3.21	\$4.00	\$6.35
KO Box Connector.....	1.18	2.49	3.28	4.30
NO.....
S&A Cable Connector.....
SLP Short Elbow.....	2.66
KOL Box Connector.....	2.07	4.27
KOR Reducer.....

	3/8"	1/2"	3/4"	1 1/4"
Blank Metal.....	\$.12	\$.16	\$.22	\$.40
Rubber Gasket.....	—	—	.22	.60
Metal, 1/4 Nip.....	.28	.35	.49	.80
" 1/2 ".....	.32	.40	.54	.80
" 3/4 ".....	.35	.42	.56	.75
" 1 ".....	.42	.50	.70	.75
Porcelain with Holes.....	.14	.21	.35	.50
Metal, Cord Grip.....	.28	.35	.40	—

	1½"	2"	2½"	3"
Blank Metal.....	\$-03	\$-70	\$1.05	\$1.05
Rubber Gasket.....	..28	..54	..94	..94
Metal, ¼ Nip.....	..82
" ½ ".....	..86
" 1 ".....	..88
" 1½ ".....	..96
Porcelain with Holes.....	..65	..84	1.12	1.12
Metal, Cord Grip.....

	¼"	½"	1"
Lamp Recept., without Shade Holder Groove PR....	\$.35	\$.42	\$.49
" " with Shade Holder Groove PRS....	.42	.49	.66
Porcelain fc. Weatherproof Socket WP2.....	.28		
Polarity Plug Receptacle 10 Amp. P.....	.66	.63	.70
" Duplex PD.....		.70	.78

Snap Switch	5 Amp.	125 Volt	Non Indicating....	Sgle. Pole \$.70	Dble. Pole	3 Pole \$1.26
" "	5 "	125 "	Indicating.....	.77	.....	.....
" "	10 "	125 "	Non-Indicating....	1.12	\$1.47	1.47
" "	10 "	125 "	Indicating.....	1.26	1.68	.....

Any Make

Type	Any Make			2 Gang		
	3/4"	1"	1 1/2"	3/4"	1"	1 1/2"
FSE-FSB.....	\$1.05	\$1.26	\$1.40	\$1.82	\$2.03	\$2.24
FSC-L & R.....	1.33	1.61	1.83	2.10	2.31	2.66
FST.....	1.33	2.31	2.73	.....	.....	.....
FSU.....	1.26	1.61	2.03	.....	.....	.....
FSD.....	1.75	2.31	2.73	2.38	2.73	3.08

Type	3 Gang			4 Gang		
	3/4"	1"	1 1/2"	3/4"	1"	1 1/2"
FSE-FSB.....	\$2.73	\$3.01	.....	\$3.36	\$3.64	.....
FSC-L & R.....	3.08	3.36	.....	3.71	3.99	.....
FST.....	.....	.....	.....	.....	.....	.....
FSU.....	.....	.....	.....	.....	.....	.....
FSD.....	\$3.22	3.57	3.85	\$4.27	.....	.....

	One	2
	Gang	Gang
Blank Metal Plate.....	\$.37	\$.70
Receptacle Plate.....	.28	.38
Toggle or Push Button Switch Plate.....	.38	

Type	5 Amp.		10 Amp.		
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
OA.....	\$.63	\$.64	\$.77	\$1.05	\$1.33
OC.....	1.19	1.05	.91	1.26	1.68
OCB.....	1.19	1.54	1.33	1.75	2.24
OE.....	.56	.77	.70	.98	1.26
OEB.....	.91	1.12	1.05	1.33	1.75
OL.....	.91	1.12	1.05	1.33	1.75
OLB.....	1.19	1.54	1.33	1.75	2.24
OT.....	1.19	1.54	1.33	1.75	2.24
OTB.....	1.54	1.96	1.68	2.10	2.80
OU.....	.77	1.05	.91	1.26	1.68
OUE.....	1.19	1.54	1.33	1.75	2.24
OX.....	1.54	1.96	2.03	2.10	2.80
OXB.....	1.80	2.31	2.33	2.82	3.36

	2 Amp.		
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
OA.....	\$1.05	\$1.19	\$1.61
OC.....	1.19	1.40	1.96
OCB.....	1.61	1.96	2.52
OE.....	.98	1.13	1.47
OEB.....	1.33	1.54	2.10
OL.....	1.33	1.54	2.10
OLB.....	1.61	1.96	2.52
OT.....	1.61	1.96	2.52
OTB.....	2.31	2.38	3.03
OU.....	1.12	1.47	1.96
OUE.....	1.61	1.96	2.52
OX.....	1.96	2.38	3.21
OXB.....	2.31	2.87	3.78

	5	10	20
	Amp.	Amp.	Amp.
Blank Metal Cover, Round.....	\$.21	\$.28	\$.31
Porcelain Cover, Round with holes.....	.21	.35	.46
Metal Cover with 3/4 or 9/16 Cord Grip.....	.35	.42	.46
Blank Metal Cover with 1/2 Male or female nipple.....	.42	.48	.56
" " " " " 3/8 " " " "	.49	.56	.61
" " " " " 1/2 " " " "	.56	.63	.70
Rubber Gaskets.....	.12	.14	.21
Lamp Receptacles Porcelain Edison Base.....	.12	.49	.56
Composition T Slot.....	.84		

		REDUCED PRICES						
	Large End	14"	1"	14"	14"	2"	24"	3"
Small End	14"	\$.41	\$.53	\$.77	\$.80	\$1.05	\$1.40	\$1.55
"	14"60	.76	.90	1.19	1.67
"	14"
"	14"81	.94	1.29	1.84
"	14"	1.13	1.60	2.45
"	14"	1.51	1.90	2.45
"	14"	2.27	2.97
"	24"	3.29

Fittings, Threadless

Fittings, "Adapti"

FITTINGS, SPRAGULETS, WIRELETS
OR T & BBRANCH TYPE
Series 48

Description	G.E., Steel City or T & B Numbers	Price Each
Branch Body Rectangular for 1/4" & 3/8" Conduit.....	SP-48241	\$.25
Cover Metal Flat Closed.....	SP-48C1	.10
" " " " with 1/4" Knockout.....	SP-48C6	.10
" " " " with 1/4" Bushing.....	SP-48C8	.12
" " " " with 1/4" Bushing.....	SP-48C11	.16
" " " " with 1/4" Male or Female Nipple.....	SP-48C22 & 23	.30
" " " " with 1/4" Male or Female Nipple.....	SP-48C24 & 25	.40
Cover Porcelain with one or two wire Holes.....	SP-48C75 & 76	.14
" " " " three or four wire Holes.....	SP-48C77 & 78	.15

SHALLOW TYPE
Series 14

Description	G.E., Steel City or T & B Numbers	Price Each
Body Octagonal Shape for 1/4" & 3/8" Conduit.....	SP-14241	\$.35
Cover Metal Flat Closed.....	SP-14C1	.10
" " " " with 1/4" Knockout.....	SP-14C7	.10
Cover Metal Flat Pendant with 1/4" Bushing.....	SP-14C8	.12
" " " " with 1/4" or 3/8" Male Nip.....	SP-14C11	.16
" " " " with 1/4" or 3/8" Male Nip.....	SP-14C22-24	.30
" " " " For all surface Mounted Devices.....	SP-14C25	.14
" " " " Raised for Sign Receptacles.....	SP-14C31-34-35-36	.12
" " " " Flat for all Flated Devices.....	SP-14C39	.35
" " " " Porcelain with one or two holes.....	SP-14C75 & 76	.14
" " " " Three or Four holes.....	SP-14C77 & 78	.15

DEEP TYPE
Series 34

Description	G. E., Steel City or T & B Numbers	Price Each
Body Deep Octagonal Shape 1/4" & 3/8".....	SP-34461	\$.45
Cover Metal Blank Flat.....	SP-34R1	.14
Cover Metal For Push Button Switch.....	SP-34R2 & 3	.14
" " " " Single Receptacle.....	SP-34R5	.14
" " " " Standard Duplex Receptacle.....	SP-34R7	.14
" " " " For GE 80 Amp. Polarized Plug Recep.....	SP-34R13	.16
" " " " GE Tumbler Switches.....	SP-34R14	.14
" " " " Hubbell and H&H Tumbler Switches.....	SP-34R15	.15

COUPLINGS

	Price
SP-1410 Complete Coupling for 1/4" Conduit.....	\$.16
SP-1420 " " " " 3/8".....	.24

FITTINGS, ENTRANCE OR SERVICE

"ADAPTI"

	1/4"	3/8"	1"	1 1/4"
Ent. Ells with Cov. Ser. 1100.....	\$.45	\$.50	\$.60	\$1.05
" " Fitt. with Cov. Ser. 2700.....	.45	.55	.65	1.10
Angle Ent. Fitt. with Cov. Ser. 2700.....	.50	.55	.65	1.20
Signal Ent. Caps No. 2810-2811.....	.75	.80	.90	1.30
Ent. Ells with Cov. Ser. 1100.....	\$1.55	\$3.00	\$5.25	\$7.65
" " Fitt. with Cov. Ser. 2700.....	1.85	3.00	5.25	7.65
Angle Ent. Fitt. with Cov. Ser. 2700.....	1.85	3.00	6.30	7.25
Signal Ent. Caps No. 2810-2811.....				

"APPLETON"

	1/4"	3/8"	1"	1 1/4"
FEB Elbow with Cov. 1700 & 1900.....	\$.50	\$.60	\$.70	\$1.70
FB Elbow with Cov. 1713 to 16.....	.35	.50	.60	.....
FC End Fitt. with Cov. 1723-33-43.....	.20	.25	.30	.....
AY Angle Fitt. 1950 to 54.....	.50	.55	.70	1.85
LAY End Fitt. with Cov. 1790 to 94.....	.45	.50	.60	1.10
FEB Elbow with Cov. 1700 & 1900.....	\$1.90	\$3.25	\$7.50	\$9.00
FB Elbow with Cov. 1713 to 16.....				
FC End Fitt. with Cov. 1723-33-43.....				
AY Angle Fitt. 1950 to 54.....	2.25			
LAY End Fitt. with Cov. 1790 to 94.....	1.75			

"BEND HICKS"

	1/4"	3/8"	1"	1 1/4"
Bend Hicks Galvanized.....	\$.60	\$.60	\$.65	\$1.75
Bend Hicks Galvanized.....	\$2.15	\$4.10	\$6.60	\$8.25

"CAP-SWIVEL-LET"

	1/4"	3/8"	1"	1 1/4"	2"
"A" Inside Work #1010 to 1064.....	\$0.20	\$0.25	\$0.30	\$0.55	\$1.30
"BW" Threadless Fitt. 4112-4134.....	.45	.50	.75	.....	.....
"BW" Threaded Fitt. 2112-2124.....	.35	.45	.....	.....	.....
"FW" Outside Work 1412-1464.....	.40	.50	.65	1.05	3.00
"LB" Service Entrance 3110-3130.....	.50	.55	.65	.....	.....
Type "AM" for Nipple 1/4" Long.....	\$0.20	For Nipple 1/4" Long.....	\$0.25		
Type "BXA" from 1600 to 1613.....	.20	From 1614-1624.....	.30		
From 1632-1634.....	.35				

"CONDULETS"—Form 6

	1/4"	3/8"	1"	1 1/4"
F Type Ent. Fitt. with Porc. Cov.....	\$.40	\$.45	\$.60	\$.65
LB Type Ent. Fitt. with Metal Cov.....	.45	.50	.60	1.15
F Type Ent. Fitt. with Porc. Cov.....	\$1.80	\$2.85	.....	.....
LB Type Ent. Fitt. with Metal Cov.....	1.40	2.45	.....	.....

"ELECTROLETS"

	1/4"	3/8"	1"	1 1/4"
FB Angle Fitt. with Cov. 713-83.....	\$.45	\$.55	\$.70	\$1.30
KA End Fitt. with Cov. 1013 to 43.....	.20	.20	.25	.35
KB Elbow Fitt. with Cov. 1113 to 33.....	.35	.50	.60	.....
SLB Elbow Fitt. with Cov. 1 to 4.....	.50	.55	.60	1.00
Y Capped Elbow Y1 to 5.....	.50	.55	.65	1.75
FB Angle Fitt. with Cov. 713-83.....	\$1.85	\$3.00	\$6.60	\$8.50
KA End Fitt. with Cov. 1013 to 43.....	.....	.....	.....	.....
KB Elbow Fitt. with Cov. 1113 to 33.....	.....	.....	.....	.....
SLB Elbow Fitt. with Cov. 1 to 4.....	.....	.....	.....	.....
Y Capped Elbow Y1 to 5.....	2.20	.....	.....	.....

"GENERAL ELECTRIC"

	1/4"	3/8"	1"	1 1/4"
With Covers				
Ent. Caps Series 1525 to 1534.....	\$.45	\$.55	\$.70	\$.95
Capped Elbow Series 1470 to 1472.....	.45	.60	.60	.....
Capped Elbow Series 1480 to 1484.....	.50	.55	.70	1.85
Insulets Series 1610 to 1612.....	.20	.25	.30	.....
Insulets Angle Series 1640 to 1642.....	.30	.40	.50	.....
Entrance Ells 1490 to 1495.....	.40	.45	.55	1.00
With Covers				
Ent. Caps Series 1525 to 1532.....	\$1.60	\$2.75	\$8.90	\$10.90
Capped Elbow Series 1470 to 1472.....	.....	.....	.....	.....
Capped Elbow Series 1480 to 1484.....	2.25	.....	.....	.....
Insulets Series 1610 to 1612.....	.....	.....	.....	.....
Insulets Angle Series 1640 to 1642.....	.....	.....	.....	.....
Entrance Ells 1490 to 1495.....	1.55	3.00	8.35	10.50

GEE-VEE

	1/4"	3/8"	1"	1 1/4"
F Service Cap Series 6000.....	\$.45	\$.50	\$.70	\$1.00
B " " " " 16000.....	.45	.50	.70	1.75
F Pipe " " " " 1000-1310.....	.40	.50	.75	.85
B " " " " 2000 & 2100.....	.40	.45	.65	.75
FB Universal " " " " 3000.....	1.00	1.25	1.65	2.75
Weathercap " " " " 40122.....	.30	.30	.....	.....
Service Elbow " " " " 19000.....	.45	.50	.60	1.10
Endo Terminal Series 90000.....	.15	.20	.25	1.95
Endo with Male Thread Series 70000.....	.25	.35	.50	.....
Endo for Armored Cable				
Series 30000 Nos. 14 and 12 wire, \$1.15; No. 10 wire, \$3.30; No. 6 wire, \$4.55				
SEG Service Elbow Cable .400-1/4"x3/4"x3/4", \$7.70; 1/2"x1/2"x1/2", \$1.15; 1/4"x1/4"x1/4", \$1.75				
F Service Cap Series 6000.....	\$1.90	\$3.35	\$7.60	\$9.25
B " " " " 16000.....	1.90	3.35	7.60	9.25
F Pipe " " " " 1000-1310.....	1.20	1.75	3.00	4.15
B " " " " 2000 & 2100.....	1.05	.....	.....	.....
FB Universal " " " " 3000.....	3.75	5.40	9.60	12.70
Weathercap " " " " 40122.....	.....	.....	.....	.....
Service Elbow " " " " 19000.....	2.75	3.60	.....	.....
Endo Terminal " " " " 90000.....	1.40	2.40	4.55	7.40

"TAPLETS"

	1/4"	3/8"	1"	1 1/4"	2"	2 1/2"	3"
AR End Fitt. with Bushing.....	\$.40	\$.55	\$.70	\$.90	\$1.30	\$1.70	\$2.30
BF Angle Fitt. with Covers.....	.35	.65	1.20	.....	.....	.....	.....
FA End Fitt. with Covers.....	.15	.20	.....	.....	.....	.....	.....
FB End Fitt. with Covers.....	.30	.45	.....	.....	.....	.....	.....
FF Service Fitt. with Covers.....	.40	.45	.65	1.00	1.70	2.95	6.25
FH Service Fitt. with Covers.....	.85	1.05	1.50	1.90	3.05	4.90	11.50
SE Service Elbow with Covers.....	.95	1.10	1.25	1.90	2.50	4.20	8.45

T & B

	1/4"	3/8"	1"	1 1/4"
Ent. Cap 1525-32 with Cover.....	\$.40	\$.50	\$.65	\$1.00
Capped Elbow 1470-84 with Cover.....	.50	.60	.70	1.95
Insulets 1610-11-12 with Cover.....	.15	.20	.25	.....
Angle Insulets 1640-1-2 with Cover.....	.30	.45	.60	.....
Cable Insulets 2000 with Cover.....	.15	.....	.....	.....
Ent. Cap 1525-32 with Cover.....	\$1.70	\$2.95	\$7.55	\$9.25
Capped Elbow 1470-84 with Cover.....	2.30	.....	.....	.....
Insulets 1610-11-12 with Cover.....	.....	.....	.....	.....
Angle Insulets 1640-1-2 with Cover.....	.....	.....	.....	.....
Cable Insulets 2000 with Cover.....	.....	.....	.....	.....

"V. V."

	1/4"	3/8"	1"	1 1/4"	2"	2 1/2"	3"
Type 2 Term. Fitt. with Cov.....	\$.60	\$.80	\$1.05	\$1.65	\$2.15	\$3.85	.....
Type 6 Term. Fitt. with Bush.....	.40	.55	.70	.90	1.30	1.70	2.30
Type 9 Term. Fitt. with Cov.....	.70	1.05	1.40	2.80	4.20	7.00	12.65
F with Porc. Cover.....	.40	.45	.60	.95	1.60	2.75	6.95
FAB with Porc. Cover.....	.25	.40	.45	.85	1.15	2.35	3.80
FC Pipe End Porc. Cover.....	.15	.20	.25	.....	.....	.....	.....
FCBX with Cover.....	.15	.....	.....	.....	.....	.....	.....
FL with Cast Cover.....	.40	.55	.65	1.15	1.35	2.45	.....
Y Bend Hick.....	.50	.60	.65	1.75	2.15	4.10	.....

FITTINGS, "ADAPTI"

ROUND "ADAPTI" BOXES

Series Numbers	Style	1/4"	3/8"	1"	1 1/4"	2"
No. 2900 to 2903.....	1 Back Outlet	\$.40	\$.46	\$.60	\$1.05	1.80
No. 3100 to 3105.....	Side	.40	.46	.60	1.05	1.80
No. 3100T & 3101T						
Threadless " " " ".....		.48	.55	.....	.....	.....
No. 3170 to 3175.....		.46	.53	.66	1.15	1.85
No. 3200 to 3205.....	2	.48	.55	.73	1.25	2.11
No. 3200T & 3201T						
Threadless " " " ".....		.60	.67	.....	.....	.....
No. 3270 to 3275.....		.60	.67	.88	1.40	2.25
No. 3170 to 32175.....		.53	.60	.85	1.34	2.20
No. 3300 to 3305.....	3	.64	.75	.98	1.60	2.65
No. 3300T to 3305T						
Threadless " " " ".....		.80	.92	.....	.....	.....
No. 33170 to 33175.....		.70	.82	1.05	1.70	2.70
No. 3400 to 3405.....	4	.80	1.00	1.20	1.85	2.85
No. 3500 to 3705.....	2	.53	.60	.73	1.40	2.25
No. 3800 to 3905.....	4	.53	.60	.80	1.40	2.25
No. 3900 to 4105.....	3	.80	.93	1.05	1.75	2.85
No. 4800 to 5005.....	4	.93	1.05	1.32	1.90	3.50

Description		1 1/2"	1 3/4"	1 5/8"
500-501-502	Base Only	\$.27	\$.27	\$.54
800X-801X	Extension Ring	.27	.27	.40
501A	Base Concealed to Expd.	.66	.66	.66
0500	" with Tapped Boss	.33	.33	.33
510 to 512	Base	.40	.40	.80
520 to 522	"	.27	.27	.27
30 to 35	Metal Side Plates	.14	.14	.20
40 to 42	Insulated Side Plates	.16	.16	.33
50 to 54	Arm'd. Flex. Side Plates	.40	.40	.40
60 to 65	Angle Outlet	.16	.22	.42
70 to 75	Elbow Outlet	.22	.29	.50
90 to 93	Connecting Outlet	.2633
100 & 101	Straight for No. 500 Base	.16	.22
110 to 113	" " No. 501 "	.26	.33	.42
120 to 125	" " No. 502 "	.46	.53	.66
130 to 135	" " No. 503 "	1.05	1.32	1.60
140 to 145	" " No. 504 "	2.65	3.05	3.45
300 & 301	Threadless Outlet	.20	.25
310 & 311	"	.33	.40
Description		1 1/2"	1 3/4"	2"
500-501-502	Base Only	\$.54	\$1.06	\$1.06
800X-801X	Extension Ring	.40
501A	Base Concealed to Expd.	.66
0500	" with Tapped Boss
510 to 512	Base	.80	1.60	1.60
520 to 522	"	.52	1.06	1.06
30 to 35	Metal Side Plates	.20	.38	.38
40 to 42	Insulated Side Plates	.33	.66	.66
50 to 54	Arm'd. Flex. Side Plates	.66
60 to 65	Angle Outlet	.48	.92	1.05
70 to 75	Elbow Outlet	.55	1.00	1.12
90 to 93	Connecting Outlet40	.40
100 & 101	Straight for No. 500 Base
110 to 113	" " No. 501 "	.48	.92	1.05
120 to 125	" " No. 502 "	.80	.92	1.05
130 to 135	" " No. 503 "	1.85	2.10	2.40
140 to 145	" " No. 504 "	3.85	4.25	4.60
300 & 301	Threadless Outlet
310 & 311	"

Numbers	Description	Price
1	Porcelain One Hole Cover.....	\$.11
2	Metal For Devices.....	.30
3	Porcelain One Hole Cover.....	.36
4	Porcelain.....	.72
5 & 6	Porcelain with $\frac{1}{8}$ " Male or Female Nipple.....	.81
7 & 8	" " " "	.82
9 & 10	Malleable with $\frac{1}{8}$ " Male or Female Nipple.....	.82
11 & 12	" " " "	.87

NOTE: For "Adapti" Entrance Fittings See Page PL-13.

**Crouse Hinds—Appleton & Similar
Type GCA**

Fitting No. GCA-12 For 1/2" Conduit Without Soldering Lug.....	Price \$.70
" " " -172 " " with " " .....	.75

	With Angle Adjustment	1/2" One Strap	3/4" Two Straps	1" Three Straps
GCD-12 Fitting without Lug		\$.60		
GCD-173-22-32 with "		.85	\$1.55	\$2.50

Type GCE				
GCE-142	For 1/2"	With Threaded Plug	Terminal without Lug	
GCE-242	" 3/4"	" " " "	with Lug	
GCE-342	" 1"	" " " "	with Lug	

GCE1	For $\frac{1}{2}$ " Conduit.....	\$0.40
GCE2	" $\frac{3}{4}$ " "55
GCE3	" 1" "70

Type GC	
For Open Ground Wire	
GC-91 Cast Brass with No. 4 Lug and One Strap— $\frac{1}{2}$ " to 1"	Water Pipe \$.70
GC-92 Cast Brass with No. 4 Lug & One Strap $\frac{1}{2}$ " to 2"	Water Pipe. .75
GC-92Z " " " " " 00 Lug & Two Straps " $\frac{1}{2}$ " to 2"	" " 1.40

GC191	Water Meter Shunt For $\frac{1}{4}$ to 1" Water Pipe.....	\$1.75
GC192	Water Meter Shunt For $\frac{1}{2}$ to 2" Water Pipe.....	1.80

GC BRASS BUSHINGS		For Groundnut Fittings							
Size	1/8"	3/8"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	
Without Screw or Lug.	\$.10	\$.13	\$.20	\$.24	\$.31	\$.46	\$.84	1.10	
With Screw & Lug....	.20	.24	.31	.32	.40	.61	1.00	1.25	

G. E.	T. & B.	Description	Price
SP-800-05	3670-80	1/2" Body Saws 1/2" to 2"	\$0.90
SP-810-15	3671-81	1/2" " " 1/2" to 2"	1.60
SP-820-25	3672-82	1/2" " " 1/2" to 2"	2.50

GROUNDING WEDGES											
SP-900 to 911	3650 to 3659	1½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
		15c	20c	24c	28c	30c	45c	90c	\$1.10	\$2.00	\$2.25

SP-600	8"	Grounding Jumper.....	\$0.45
SP-601	12"	" " " "	.75

Description		Size of K. O.	Price Each
Standard Squeeze Connector	$\frac{3}{8}$ - $\frac{1}{2}$		\$.06
"	Set Screw Connector $\frac{3}{8}$ - $\frac{1}{2}$06
"	Slip In Connector $\frac{3}{8}$ - $\frac{1}{2}$06
"	Duplex Connector $\frac{3}{8}$ - $\frac{1}{2}$12

STRAIGHT		1	.18
BOX	Squeeze	1	.18
	or		.30
CONNECTORS	Tangent	1	.50
	Type	1	.65
		2	.85
		3	1.25

90 DEGREE ANGLE BOX CONNECTOR	Squeeze or Tangent Type	1 1/2"	1 3/4"	2"	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	5 1/2"	6"	6 1/2"	7"	7 1/2"	8"	8 1/2"	9"	9 1/2"	10"	10 1/2"	11"	11 1/2"	12"	12 1/2"	13"	13 1/2"	14"	14 1/2"	15"	15 1/2"	16"	16 1/2"	17"	17 1/2"	18"	18 1/2"	19"	19 1/2"	20"	20 1/2"	21"	21 1/2"	22"	22 1/2"	23"	23 1/2"	24"	24 1/2"	25"	25 1/2"	26"	26 1/2"	27"	27 1/2"	28"	28 1/2"	29"	29 1/2"	30"	30 1/2"	31"	31 1/2"	32"	32 1/2"	33"	33 1/2"	34"	34 1/2"	35"	35 1/2"	36"	36 1/2"	37"	37 1/2"	38"	38 1/2"	39"	39 1/2"	40"	40 1/2"	41"	41 1/2"	42"	42 1/2"	43"	43 1/2"	44"	44 1/2"	45"	45 1/2"	46"	46 1/2"	47"	47 1/2"	48"	48 1/2"	49"	49 1/2"	50"	50 1/2"	51"	51 1/2"	52"	52 1/2"	53"	53 1/2"	54"	54 1/2"	55"	55 1/2"	56"	56 1/2"	57"	57 1/2"	58"	58 1/2"	59"	59 1/2"	60"	60 1/2"	61"	61 1/2"	62"	62 1/2"	63"	63 1/2"	64"	64 1/2"	65"	65 1/2"	66"	66 1/2"	67"	67 1/2"	68"	68 1/2"	69"	69 1/2"	70"	70 1/2"	71"	71 1/2"	72"	72 1/2"	73"	73 1/2"	74"	74 1/2"	75"	75 1/2"	76"	76 1/2"	77"	77 1/2"	78"	78 1/2"	79"	79 1/2"	80"	80 1/2"	81"	81 1/2"	82"	82 1/2"	83"	83 1/2"	84"	84 1/2"	85"	85 1/2"	86"	86 1/2"	87"	87 1/2"	88"	88 1/2"	89"	89 1/2"	90"	90 1/2"	91"	91 1/2"	92"	92 1/2"	93"	93 1/2"	94"	94 1/2"	95"	95 1/2"	96"	96 1/2"	97"	97 1/2"	98"	98 1/2"	99"	99 1/2"	100"	100 1/2"	101"	101 1/2"	102"	102 1/2"	103"	103 1/2"	104"	104 1/2"	105"	105 1/2"	106"	106 1/2"	107"	107 1/2"	108"	108 1/2"	109"	109 1/2"	110"	110 1/2"	111"	111 1/2"	112"	112 1/2"	113"	113 1/2"	114"	114 1/2"	115"	115 1/2"	116"	116 1/2"	117"	117 1/2"	118"	118 1/2"	119"	119 1/2"	120"	120 1/2"	121"	121 1/2"	122"	122 1/2"	123"	123 1/2"	124"	124 1/2"	125"	125 1/2"	126"	126 1/2"	127"	127 1/2"	128"	128 1/2"	129"	129 1/2"	130"	130 1/2"	131"	131 1/2"	132"	132 1/2"	133"	133 1/2"	134"	134 1/2"	135"	135 1/2"	136"	136 1/2"	137"	137 1/2"	138"	138 1/2"	139"	139 1/2"	140"	140 1/2"	141"	141 1/2"	142"	142 1/2"	143"	143 1/2"	144"	144 1/2"	145"	145 1/2"	146"	146 1/2"	147"	147 1/2"	148"	148 1/2"	149"	149 1/2"	150"	150 1/2"	151"	151 1/2"	152"	152 1/2"	153"	153 1/2"	154"	154 1/2"	155"	155 1/2"	156"	156 1/2"	157"	157 1/2"	158"	158 1/2"	159"	159 1/2"	160"	160 1/2"	161"	161 1/2"	162"	162 1/2"	163"	163 1/2"	164"	164 1/2"	165"	165 1/2"	166"	166 1/2"	167"	167 1/2"	168"	168 1/2"	169"	169 1/2"	170"	170 1/2"	171"	171 1/2"	172"	172 1/2"	173"	173 1/2"	174"	174 1/2"	175"	175 1/2"	176"	176 1/2"	177"	177 1/2"	178"	178 1/2"	179"	179 1/2"	180"	180 1/2"	181"	181 1/2"	182"	182 1/2"	183"	183 1/2"	184"	184 1/2"	185"	185 1/2"	186"	186 1/2"	187"	187 1/2"	188"	188 1/2"	189"	189 1/2"	190"	190 1/2"	191"	191 1/2"	192"	192 1/2"	193"	193 1/2"	194"	194
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45 DEGREE ANGLE BOX CONNECTOR	Squeeze or Tangent Type	1" 1 1/4"	.85 .48 .85 1.00 1.25
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PANEL BOX	1	0.35
ADAPTOR	1	0.40
FOR CONVERTING	1	0.65
ANY CONNECTOR	1	0.80
INTO A	1	1.10
PANEL	2	1.65
CONNECTOR	2	2.20

	For	Conduit	
COUPLINGS	"	"	.86
FOR	"	"	.40
FLEXIBLE	"	"	.45
STEEL	"	"	.60
CONDUIT	"	"	.75
	"	"	1.00
	"	"	1.25

	For 1/2" Conduit	1.00
COUPLINGS FOR RIGID TO FLEXIBLE CONDUIT	For 1/2" Conduit	.40
	" 1" "	.50
	" 1 1/2" "	.60
	" 2" "	.80
	" 2 1/2" "	1.00
	" 3" "	1.50

Bushings or Ferrules—Brass.....	.02
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Number	Description	Price
2150-57-60-61	Straps—Fasteners & Bushings.....	\$.03
2159	Toggle with Wire Loop.....	.15
2176-2180-2154	Set Screw Connector.....	.15
2179-2181	Special Box Connector.....	.15
2183-2156	90 Degree Box Connector.....	.31
412-413	Connector for Ovalflex to Metal Molding.....	.35
9000-S	Squeeze Connector.....	.10

COMMERCIAL GLASSWARE

Fitters NOT INCLUDED		Standard	Plain White Only
Diameter or Width	Depth or Length		Size

Diameter or Width		Depth or Length		Fitter	Price
6"	Diameter	5%	Inches to 6	3 1/2"	\$ 1.00
8"	Diameter	5%	" 6 1/2	4"	1.25
9"	"	5 1/2	" 7 1/2	4 1/2"	1.35
10"	"	5 3/4	" 8	4 3/4"	1.45
12"	"	6 1/2	" 8 1/2	4" or 6"	3.25
14"	"	7 1/2	" 10 1/2	6"	4.50
16"	"	8 1/2	" 11 1/2	6"	5.25
18"	"	9 1/2	" 12 1/2	8"	8.25
20"	"	10	" 10 1/2	8"	13.00

Fitters NOT INCLUDED

8" Diameter	61¢	Inches	4"	Plain White Only
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9"	"	7½	"	4"	1.46
10"	"	8	"	4"	1.75
12"	"	8½ & 9	"	4"	2.50
14"	"	9½ & 11	"	6"	3.75
16"	"	10 and 12½	"	6"	5.25
			"	6"	6.75

6" Diameter	6 Inches Deep.....	3 1/4"	\$ 0.60
7" " "	7 " "	3 1/2"	80c

8 [°]	"	8	"	"	3 1/2	1.20
10 [°]	"	10	"	"	4 1/2 & 4 [°]	2.20
12 [°]	"	12	"	"	5-6-7-8 [°]	3.50
14 [°]	"	14	"	"	6-7-8 [°]	5.25
16 [°]	"	16	"	"	6-7-8 [°] -9 [°]	7.50

Half Shades	4 1/4"	Diam. 6"	Deep 2 1/4"	Fitter.....	\$0.75
Mission Bell Shades	4 1/4"	"	4 1/4" " 2 1/4"	"	50

			6 [#]	4 [#]	2 1/4 [#]90
			7 [#]	5 [#]	2 1/4 [#]80
			8 [#]	5 [#]	2 1/4 [#]	1.25

EXAM SECTIONS

1 Key with each dozen Guards—Extra Keys 10c each

Lamp Size	Base Style	Model No.	Price Each
15-25-40 Watt	Brass or W. P.	1420-1420A-1420B	\$2.60
50-60 Watt	Brass or W. P.	1425-1427A-1427B	.60
100 Watt	Brass or W. P.	1426-1428A-1428B	.60
150 Watt	Brass	2443	.80
200 Watt	Brass or W. P.	2444-2446A-2446B	.85
200 Old Style	Brass	2447	.95
200 Old Style	Weatherproof	2447A-2447B	1.00

Lamp Guards

PL-15
MoldingHubbell
Non-Locking Type

	15-25-40-60	75 Watt
	No. Price	No. Price
Closed Bottom Top & Collar for Brass Socket.....	5573 \$0.45	5578 \$0.50
Open Bottom with Collar for Brass Socket.....	5485 .35	5487 .40
Open Bottom No Top or Collar for Brass Socket.....	5691 .30	5692 .35
Open for Weatherproof Socket.....	5693 .30	5694 .35
Closed Bottom Top & Collar with Reflector.....	5766 .60	
Open Bottom No Top or Collar Mill Type.....	6995-6 .35	

HANGERS

FOR CABLE & CONDUIT
Minerallac

Hangers	Lead Covered	Price	Porcelain Bushings	Price
Mfgs. No.	Cable Size	Jap Fin. Glv. Fin.	Mfgs. No.	For RC Cable
0	No. 14	\$.06	1	8-2-0
1	No. 1 to 4/D	.07	2	3-0-4-0
2	4/0 to 300 M	.10	3	250M-450M
3	500 to 750 M	.10	4	500M-700M
4	800 to 1125 M	.11	5	750M-1000M
5	1500 M	.12	6	1125-2500M
6	2000 M	.15		

T & B ADJUSTABLE HANGERS

For Thin Wall Conduit

Type	Price Each
Type A Clamp Including Bolts Fits Flange 2 1/2 to 7 1/2"	\$.45
Type B & C Clamp Including Bolts Fits Flange 7 to 12"	.70
Special Bolts.....	.10

For Complete Hanger Add Supports Below to Above Prices.

Supports for above Hangers

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
For One Conduit Steel	\$.12	\$.15	\$.25	\$.30	\$.35	\$.50	\$.60	\$.75
" Two Conduit Mall.	.18	.20	.30	.35	.45			
" Four Conduit Mall.	.28	.35						

HANGERS & PERFORATED BAR

Grabber

Perforated or Extension Bar

For	1/2 to 1 1/2	Conduit Per Foot	Price
" 2 to 3"			.10
" 3 1/2 to 6"			.12

Hangers

No.	Hinge Hanger with Extn. Bar & Lag Screw	1 1/2"	2"	2 1/2"	3"
1		\$.18	\$.18	\$.20	\$.22
7	Band Hanger Extn. Bar and Beam Clamp	.22	.22	.23	.26
13	Hinge Hanger, Socket and Beam Clamp	.34	.34	.37	.38
200	Band Hanger Only	.10	.10	.12	.13
No.	Hinge Hanger with Extn. Bar & Lag Screw	1 1/2"	2"	2 1/2"	3"
1		\$.25	\$.27	\$.30	\$.34
7	Band Hanger Extn. Bar and Beam Clamp	.28	.30	.32	.34
13	Hinge Hanger, Socket and Beam Clamp	.40	.47	.48	.50
200	Band Hanger Only	.14	.16	.18	.20

STANDARD SHADE HOLDERS

Finished

	2 1/4"	3 1/4"	4"
Uno 3 Screw Holder with Screw Top.....	\$0.10	\$0.30	\$0.40
Uno 3 Screw Holder with Contractile Collar.....	.10	.30	.45
Uno Wire Spring Holder with Screw Top.....	.15	.35	
Uno Wire Spring Form H with Collar.....	.30		
Weatherproof 3 Screw Holders Clamp Top.....	.20	.35	.60

KNOBS, TUBES & CLEATS, PORCELAIN

KNOBS

Type	With Screw	Price Each	Without Screws
No. 1 Nailit Knob.....		.02 1/2	.02
No. 5 1/2 Split Knobs.....	\$.02 1/2		.02 1/2
5 1/2 Solid Knobs.....	.03		.02 1/2
5 1/2 Screwit.....	.04		.04
4 & 4 1/2 Knobs Solid.....	.04 1/2		.06
No. 9419 Split 1 1/2 x 1 1/2.....		.12	.12
9420 Split 2 x 2 1/2.....		.10	.10
22 Victor Split.....		.07	.07
6061 Solid Teleph. 2 Grooves.....		.10	.10
6062.....		.10	.10

TUBES

Diam.	Price Each	3" & under	4"	5"	6"	8"	10"	12"	14"	16"
1/4"		\$.01 1/2	\$.02	\$.02 1/2	\$.03	\$.10	\$.17	\$.25	\$.32	\$.40
1/2"		.02	.02 1/2	.03	.04	.11	.19	.27	.35	.43
3/4"		.04	.05	.06	.07	.13	.21	.30	.38	.47
1"		.07	.08	.09	.11	.15	.25	.34	.43	.52
1 1/2"		.10	.12	.13	.15	.18	.29	.39	.49	.59

CLEATS

2 & 3 Wire

Standard No. 334 2 & 3 Wire Unglazed Cleats without Screws Per Pair \$.04

ONE WIRE CLEATS

B & D Type—2 Piece Porcelain

No.	Height	Length	Width	For Size Wire	Price Each
1A	1 1/4"	1 1/2"	1 1/2"	14 to 6.....	\$.06
1 1/2A	1 1/2"	2 1/4"	1 1/2"	6 " 0.....	.07
2A	2 1/4"	2 1/4"	1 1/2"	0 " 000.....	.15
2 1/2A	2 1/2"	2 1/4"	1 1/2"	000 " 200,000 CM.....	.17
3A	3 1/4"	3 1/4"	1 1/2"	000 " 200,000 CM.....	.18
3B	3 1/4"	3 1/4"	1 1/2"	2 " 500,000 CM.....	.20
3 1/2B	3 1/2"	3 1/4"	1 1/2"	5 " 1,000,000 CM.....	.25
4B	4 1/4"	4 1/4"	1 1/2"	8 " 1,250,000 CM.....	.35
4 1/2B	4 1/2"	4 1/4"	1 1/2"		

LOOM & L-SUNDRIES

LOOM, NON-METALLIC CONDUIT

Size	Price per Foot
1/4"	\$.03 1/2
1/2"	\$.03 1/2
3/4"	\$.06
1"	\$.12
1 1/4"	\$.16
1 1/2"	\$.17
2"	\$.28 1/2

Electrical Contracting, December, 1930

SOLDERING LUGS—One Hole
Sherman-Trumbull or similar

For Wire Size	Amps.	Size Hole	Price Each
No. 10 Under.....	25	1/8"	\$.03
8.....	35	1/8"	.04
6.....	50	1/8"	.04
4.....	70	1/8"	.05
2.....	90	1/8"	.06
0.....	125	1/8"	.08
00.....	150	1/8"	.10
000.....	175	1/8"	.16
0000.....	225	1/8"	.18
250 M. C. M.....	237	1/8"	.31
400 M. C. M.....	325	1/8"	.40
450 M. C. M.....	362	1/8"	.55
500 M. C. M.....	400	1/8"	.66
600 M. C. M.....	450	1/8"	.70
800 M. C. M.....	550	1/8"	.85
1000 M. C. M.....	650	1/8"	1.00

For 2-Hole Lugs

With Regular Stud Holes Add 50% To Above Prices.

CONDUIT LOCKNUTS

Also on Page PL-8

Size	Price
1/2"	\$.01
3/4"	.01 1/2
1"	.02
1 1/4"	.05
1 1/2"	.06
2"	.11
2 1/2"	.19
3"	.32
3 1/2"	.40
4"	.58

LINKS

For Chain

Non-Insulating Splicing Links—Any Make—Each.....	Price
Insulating.....	\$.05
Luminous Acorns—See Page PL-4 and Page PL-18.	.15

MAIL BOXES

COUCH

No. 73 Tilting Mail Boxes Post Office approved per Receptacle.....\$3.30

"TILTING" Speaking Tube Type

Series 7303 to 7309 and 73010 to 73012

No. of Boxes	3	4	5	6	7	8	9	10	11	12
Price ea.	12.90	17.20	21.50	25.75	30.00	34.35	38.60	43.00	47.20	51.50

SINGLE GANG Non-Tilting

No. 78 or 780 with call button or speaking tube unit.....Price each \$3.15

MOLDING, NATIONAL

MOLDING

	Price
022 One Piece Metal Molding for Two Wires 1/2" Wide—Per Foot..	\$.10
044 " " " " " Two to Four 1" " " " "	.12
222 Two " " " " " Two Wires 1/2" " " " "	.11
333 " " " " " Two to Four 1" " " " "	.12

FITTINGS

Number	Description	Price	Number	Description	Price
200-201	Bushing.....	\$.02	370	Blank Cover.....	.25
223	Clip.....	.04	371-2-3	Porcelain Cover.....	.25
229	Coupling.....	.06	376	Corner Box.....	.45
234	Cross.....	.45	377	Adaptor.....	.10
235	Tee.....	.23	392	Snap Switch.....	.90
236	90 Deg. Elbow.....	.20	397	Key Socket 2 1/2"	
237	45 " ".....	.20		Base.....	.75
238-9	90 " ".....	.20	400	Base For Socket.....	.70
278	Adaptor.....	.05	400X	3" Recept. Base.....	.70
300	" ".....	.06	401	Box Connector.....	.22
303	" ".....	.04	406	Combination Fitting.....	.25
315	Connector.....	.40	407	Utility Box.....	.35
316	90 Deg. Coupling.....	.30	412	Connector.....	.24
317	90 " Connector.....	.30	413	" ".....	.26
321A-B	Rawl Plug.....	.06	414-S	" ".....	.24
323	Joint Cap.....	.03	419A-B-C	Toggle Bolt.....	.10
324	Cross.....	.35	420A-B-C	Spring Toggle Bolt.....	.09
335	Tee.....	.42	421	Lead Shield.....	.10
336	90 Deg. Elbow.....	.20	425A	Folding Strap.....	.02
337	90 " Ext. Elbow.....	.20	426	Susp. Strap 2 Line.....	.06
337B	Cap for Elbow.....	.15	427	" " 3 ".....	.08
338	90 Deg. Int. Elbow.....	.20	428A	Folding Strap.....	.04
338B	Cap for Int. Elbow.....	.15	430	Fixture Rosette.....	.65
339X	2 1/2 Comb. Plate.....	.17	434	Single Roset.....	.06
340X	Terminal Block.....	.30	435	Double Strap.....	.08
341	Junction Box.....	.45	436	Coupling.....	.06
342	3" 10 Amp. Box.....	.45	437	45 Deg. Elbow.....	.20
343	2 1/2 5 Amp. Box.....	.45	438	Sgle. Flush Box.....	1.00
344	Base Coupling.....	.08	439	" Surface Box.....	.80
344X	Coupling.....	.04	439X	One Gang Box.....	.65
345	Single Strap.....	.06	439D	" ".....	.80
348	Cord Rosette.....	.38	439S	Sgle. Surface Box.....	.75
348X	3" Cord Rosette.....	.38	440	Two Gang Surface Box.....	1.15
354	Double Strap.....	.04	440D	Two Gang Box.....	1.10
355	Ground Clamp.....	.12	440X	" ".....	1.10
356-7	Keyless Recept.....	.70			
356X	3" Recept. Base.....	.80			
360	Conven. Outlet.....	.95			
360X	3" Plug Recept. 600W.....	.95			
363	4 1/2 Split Base.....	.35			
363A-B	4 1/2 Cover Closed.....	.30			
365	4 1/2 Canopy Base.....	.60			
365A	4 1/2 " " &.....				
365X	Stud.....	.70	441	Single Adaptor.....	.15
366	4" Comb. Plate.....	.15	442	Two Gang Adaptor.....	1.15
366X	6" Canopy Base.....	.85	2155-6	Bushing.....	.05
	Open Work Coup.....	.40		90 Deg. Connector.....	.35



Where the mercury drops out of the bulb the Colt stands for law and order

What a wealth of romance clings about the activities of the famous Royal Canadian Northwest Mounted Police! The United States Cavalry had their task cut out for them when subduing the American Indian, and away up North in the land of no shelter the Mounties shouldered the rebellion of the half-breeds on the North Saskatchewan under Louis Riel and Great Bear, in 1869.

Out of sight from civilization, over white desolate wastes and facing nature at her cruellest, the Colt, to the Canadian Mounted, often proved his only friend.

On sun-baked prairie and snowswept slope, Colt has

always stood for protection—still available. And today, another form of Colt protection is safeguarding electrical equipment through the NOARK line of safety switches and meter protective devices—for over seven years Colt made. The fine degree of mechanical precision so typical of Colt is clearly seen in the Colt-Noark line. Watch-like

methods of accuracy are stamping NOARK products as true members of the Colt family. NOARK products need no introduction to users of electrical equipment, for NOARK is an old and honored name. Its association with Colt assures added progress and protection.

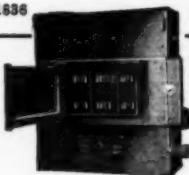


COLT'S PATENT FIRE ARMS MFG. CO.,
Established 1838

Electrical Division, HARTFORD, CONN., U.S.A.
Electrical Division 1886

WHERE MAINTENANCE

In steel mills, mines, paper mills, chemical plants, and other places where operating conditions are ruinous to ordinary switches, Colt-Noark Quadbreak is standing up.



CONDITIONS ARE SEVERE

Send for Catalog "G" and detailed description. "The Rampant Colt," an interesting publication, mailed on request.



CRESCENT QUALITY AS HIGH AS THE HIGHEST

As towering skyscrapers impress themselves upon the eye of the beholder, so does Crescent Quality impress itself upon the mind of your customer. In buildings where only the finest materials are used, Crescent Wire & Cable is known by the company it keeps.

No matter how big the job, nor how complicated it may seem, you may rely on the factor of Crescent built-in dependability to safeguard your interests.

CRESCENT
Insulated Wire and Cable Co.
CRESCENT ARMORED WIRE CO.
TRENTON N. J.



CRESCENT PRODUCTS

"Crescent" National Electric Code Rubber Covered Wire and Cable

Intermediate Grade Rubber Covered Wire and Cable.

"Imperial" 30% Rubber Covered Wire and Cable.

"Crescent" Lead Encased Wire and Cable.

"Crescent" Armored Bushed Cable.

"Crescent" Lead Covered Armored Cable.

"Crescent" Flexible Metallic Conduit.

"Crescent" Varnished Cambric Cable, Lead Encased or Braided.

All kinds of special wires and cables.

OVALDUCT

3 Wire.....Per Foot \$.17

OVALDUCT FITTINGS

No.	Description	Price Each
24-CQ	Extension box cover for 4" outlet boxes.....	\$.45
401	Box Connector with 1/2" Bondnut.....	.25
2133	Squeeze Type Coupling 1 1/4" long.....	.15
2134	90 Degree Internal Elbow.....	.35
2135	45 " Flat.....	.26
2136	One piece 90 degree elbow.....	.60
2156	90 " Box Connector.....	.30
2159	Wire Toggle Fastener.....	.03
2161	Strap Fastener.....	.02
2181	Connector Ovalduct to Oval Knockout.....	.10
2662	Outlet Box 4 x 1/2.....	.20
2663	Extension Ring for Boxes.....	.20
2665	Outlet Box 4 x 1/2 with Fixture Stud.....	.28
2666	" " 3 1/4 x 1/2.....	.20
2665	" " 3 1/4 x 1/2 with Fixture Stud.....	.26
4170-S1	Sectional Switch Box 4 x 1 1/2 x 1.....	.35
4172-S1	Spacer for above box.....	.30

MOLDING, WIREMOLD

MOLDING

No. 500 2-Wire, price per ft.....	\$.10
" 700 4-Wire, " " ".....	.12
" 1000 Master Size, " " ".....	.23

FITTINGS FOR No. 500
2 Wire

Number	Description	Price
502	Bushing.....	\$.04
504	Supporting Strap.....	.04
506	Connecting Cover.....	.04
511-12	45 & 90 Deg. Elbows.....	.22
515	Tee Plain.....	.36
516	Cross Plain.....	.38
517	Internal Elbow.....	.24
518	External.....	.22
519	Corner Box.....	.38
521	1 Piece Rosette.....	.36
523	1/2" Fixture Rosette.....	.75
524	3/4" ".....	.70
525	Receptacle Base.....	.80
526	Keyless Receptacle.....	.95
527	Attachment Plug.....	1.00
532-23	2 1/2" & 3" Outlet Box.....	.45
585	Openwork Coupling.....	.36
590	Moulding Connector.....	.08

FITTINGS FOR No. 700
4 Wire

5701	Coupling.....	\$.04
702	Bushing.....	.04
5703	Clip.....	.06
704	1 & 2 Hole Strap.....	.06
706	Connection Cover.....	.04
5707	Multiple Strap.....	.10
5708	Fixture Hook.....	.22
5709	Ground Clamp.....	.12
5711-12	Elbows 45 & 90 Deg.....	.22
5715	Tee.....	.36
5717	Internal Elbow.....	.25
5717A	Elbow Pull Box.....	.50
5718	External Elbow.....	.22
5719	Corner Box.....	.45
5720	Narrow Fitting.....	.55
5720A	Show Case Outlet.....	.45
5721	1 Piece Rosette.....	.35
5724	Comb.....	.70
5725	Receptacle Base.....	.80
5726	Keyless Receptacle.....	.95
5727	Plug Receptacle.....	1.00
5728	Utility Box.....	.40
5729	" Cond. Type.....	.40
5730	Contact Block.....	.26
5731	Blank Cover.....	.15
5732-3	2 1/2" & 3" Outlet Box.....	.45
5734	Closed Extension.....	.65
5735	Distribution Box.....	.75
5736	Blank Cover.....	.16
5737	4 1/2" Extension Box.....	.65
5738	4 1/2" Fixture Box.....	.65
5738D	Dimple Thru Hook Conn.....	1.50
5738E	Stamped Hook.....	.65
	Canopy.....	.65

FITTINGS FOR No. 700
4 Wire—Continued

Number	Description	Price
5739	6 1/2" Fixture Box.....	\$.95
5739A	6 1/2" Extension.....	.95
5744	Single Deep Box.....	.85
5744-2	2 Gang.....	1.20
5745	Combination.....	.70
5747	Single Shallow Box.....	.75
5747-2	2 Gang.....	1.05
5747-3	3 ".....	1.15
5748	Single Surface.....	.85
5748-2	2 Gang.....	1.15
5748-3	3 ".....	1.20
5748S	Shallow " Rec.....	.65
5749	Switch & Recep.....	1.00
5750	Push Switch Box.....	1.05
5751	Single Adp. Plate.....	.70
5752	2 Gang.....	1.25
5753	3 ".....	1.30
5760	Blank Extension Box.....	.95
5780	Chase Nipple.....	.30
5781&A	1/2" & 3/4" Box Connector.....	.35
5782&A	1/2" & 3/4" Pipe Coupling.....	.36
5783	1/2" Elbow Box Conn.....	.36
5784	1/2" Pipe Coupl.....	.36
5785	Comb. Connector.....	.28
5788	Adj. Offset Conn.....	.40
	Openwork Connector.....	.45

FITTINGS FOR No. 1000
MASTER SIZE

Number	Description	Price
1001	Coupling.....	\$.06
1002	Bushing.....	.04
1003	Clip.....	.06
1005	One Hole Strap.....	.08
1008	Hanger Assembly.....	.90
1008A	Hanger Clamp.....	.18
1009	Ground.....	.20
1011	90 Deg. Flat Elbow.....	.40
1013	Adj. Elbow.....	.40
1017	Internal Elbow.....	.40
1018	External.....	.35
1020	Keyless Receptacle.....	.40
1020A	Angle.....	1.40
1020B	Blank or Outlet Box.....	.50
1025	Utility Box.....	.70
1038	Distribution Box.....	1.10
1039	6 1/2" Fixture.....	.90
1048	Switch & Recep Box.....	1.00
1082	Pipe Coupling.....	.60
1085	Comb. Connector.....	.35
1086	Offset Connector.....	.70
1087	Kick Plate.....	.32
1089	Reducing Connector.....	.15
1000F	Flex. Fitting 18".....	1.75

LEWIS METER AND SWITCH CABINETS

CLASS A				MAIN FUSE ACCESSIBLE	
Amp.	Volts	Wire	Fuse	Neutral	Numbers
30	125-250	3	2	Solid.....	M7311-ML7311.....\$15.20
30	125-250	3	2	".....	M7311M-ML7311M.....14.65
30	125	2	1	".....	M7211-ML7211.....14.75
30	125	2	1	".....	M7211M-ML7211M.....14.65
30	125	2	2	Fused.....	M7211D-ML7211D.....14.75
60	125-250	3	2	Solid.....	M7312-ML7312.....19.75
60	125-250	3	2	".....	M7312M-ML7312M.....19.05
60	125	2	1	".....	M7212-ML7212.....19.30
60	125	2	1	".....	M7212M-ML7212M.....19.05
60	125	2	2	Fused.....	M7212D-ML7212D.....19.30
CLASS B				SEALED MAIN FUSES	
30	125	2	1	Solid.....	M5211 or ML5211.....\$12.10
30	125-250	3	2	".....	M5311 " ML5311.....12.80
30	125	2	2	Fused.....	M 211 " ML 211.....12.20
30	125-250	3	2	Unfused.....	M 311 " ML 311.....12.10
30	250	2	2	Fused.....	M 221 " ML 221.....12.95
60	250	2	2	".....	M 222 " ML 222.....15.30
30	125-250	3	2	Unfused.....	M 321 " ML 321.....12.70
30	125-250	3	2	Solid.....	M 321SN or ML 321SN.....12.70
60	125-250	3	2	".....	M 322 or ML 322.....15.30

N-SUNDRIES

PIPE NIPPLES

Size Conduit	Close Nipples—Galv.							
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Cond. Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.
2" to 3 1/2" Long.....	\$.07	\$.08	\$.12	\$.16	\$.20	\$.24	.....	.....
Length Conduit	Standard Short Nipples—Black or Galv.							
2" " 4".....	\$.10	\$.12	\$.15	.....	.....	.....	.....	.....
2 1/2" " 4 1/2" ".....	.....	.....	.....	\$.21	\$.21	.....	.....	.....
3" " 4 1/2" ".....	.....	.....	.....	.....	.....	\$.35	.....	.....
3" " 5 1/2" ".....	.....	.....	.....	.....	.....	.....	\$.70	.....
3 1/2" " 5 1/2" ".....	.....	.....	.....	.....	.....	.....	.....	\$.85
Length Conduit	Long Nipples—Black or Galv.							
4" Long.....	\$.10	\$.14	\$.20	\$.24	\$.30	\$.38	.....	.....
6" ".....	.....	.15	.17	.22	.28	.34	.40	\$.80 \$1.00
7" ".....	.....	.18	.21	.27	.34	.40	.55	1.05 1.25
8" ".....	.....	.21	.23	.30	.37	.45	.60	1.12 1.40
9" ".....	.....	.22	.25	.33	.40	.50	.67	1.22 1.55
10" ".....	.....	.24	.27	.37	.40	.56	.75	1.35 1.65
11" ".....	.....	.30	.35	.45	.58	.70	.95	1.45 1.80
12" ".....	.....	.30	.38	.48	.61	.75	1.00	1.55 1.95

CHASE NIPPLES & COUPLINGS

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Chase Nipples.....each	\$.10	\$.10	\$.10	\$.14	\$.25	\$.28	\$.32	\$.50 \$1.10
" Couplings.....	.12	.12	.12	.14	.....	.....	.....	.....

For Erickson Couplings, see Page PL-S.

CHASE MALE REDUCERS
CHASE FEMALE ENLARGERS
T & B or Similar

1/2" to 1/4" Reducer, each.....	\$.30	1/2" to 1/2" Enlargers, each.....	\$.30
1 1/4" to 1 1/2" ".....	.25	3/4" to 1" ".....	.25
1 1/2" to 1 3/4" ".....	.45	1" to 1 1/4" ".....	.35
		1 1/4" to 1 1/2" ".....	.50

NAILS—Insulated

Millonite Insulated Nails, per dozen.....	\$.05
Leather Nail Heads, ".....	.05
Staples Insulated, ".....	.05

PLUGS, ATTACHMENT

ATTACHMENT PLUGS COMPLETE

	Price
"Pony" Composition.....	\$.15
Standard.....	.20
"Genuine" Bakelite.....	.25
Polarized Standard Comp. Plug.....	.30
Large Size Double T Slot Comp. Porcelain.....	.55
Weatherproof One Piece Comp.....	.40
Benjamin #003 Swivel Plug.....	.20
Pony Body Only.....	\$.10
Standard Body.....	\$.15
Large Body.....	\$.35

10 AMP.—CAPS ONLY
For Attachment Plugs

"Pony" Cap Composition.....	\$.10
"Standard" Cap.....	.10
"Genuine" Bakelite.....	.15
Large Size Cap Composition.....	.25
Plug With Extension Knob.....	.20
Soft Rubber Cap.....	.25
"Standard" Cord Grip Cap.....	.30
" " Steel Covered Cap.....	.15
" " Brass.....	.40
" " Cord Grip.....	.40
Disappearing Door Comp. Cap.....	.75
" " Brass Cov. Cap.....	1.00
"Standard" Brass Cov. Finger Grip.....	.60
" " "Knostrain" Comp. Cap.....	.45
" " Brass Cov. Knostrain.....	.75
" " Comp. Fusible Cap.....	.60
Polarized 2 Wire Comp.....	.25
" " 2 " Steel.....	.30
" " 2 " Cord Grip.....	.45

20 AMP. CAPS
For Polarized Devices

2 Wire Brass Covered Cap.....	\$.85
2 " Steel Covered Cord Grip Cap.....	.90
3 " Steel Covered Cord Grip Cap.....	1.10

30 & 40 AMP. CAPS
For Polarized Devices

30 Amp. 2 Wire Porcelain Cap.....	\$1.45
30 " 2 " Steel Cov. Cord Grip.....	1.80
30 " 3 " Porcelain.....	1.55
30 " 3 " Steel Cov.....	2.20
40 " 3 " Str. Cap Ground. C. G.....	2.15

Flasher Plugs

Diamond Flasher Button.....	\$.60	No. 125 Speedoodle Plugs.....	\$2.50
"Propp" #530 Flasher Button.....	.50	No. 164 ".....	.60
"Rodal" 110 Volt " Plug.....	.50	No. 161 ".....	.80
220 Volt ".....	.65	No. 165 ".....	.90

PLUGS, APPLIANCE

Make	No.	Description	Price
American Beauty	802	Plug Complete for Small Irons.....	\$.40
	806	" " Large.....	1.25
	807	" " Toasters & Stoves.....	.20

Plugs, Appliance

Plates & Plugs

PLUGS, APPLIANCE, Continued

Beaver	F-1	"Gripall" Super-Type Adjustable Cont.	\$0.45
"Gripall" & "Suitzall"	F-4	Nickel Alloy	.55
	F-5	Armored Casing	.55
	F-6	Nkl. Alloy Cont.	.60
	F-7	Adj. Cont. Bakelite	.50
	F-22	"Suitzall" Heater Plug—Full Size	.20
	F-31	Standard Single Sided Cont.	.15
	F-32	Heater Plug Double Sided Contacts	.20
	F-33	Armored Casing (F-32 Type Armored)	.25
	F-34	Medium Heater Plug—Bakelite	.25
	F-36	Small Heater Plug—Black	.20
	G-1	"Gripall" Heater Switch Plug Adj. Cont.	.80
	G-2	"Gripall" Heater Switch Plug Nickel Alloy	.90
	G-21	Competitive Push Button Type	.45
	G-22	New Toggle Type	.45
Betay Ross	126	Shut Off Switch Plug	.40
	125	Safeguard Automatic Heat Control Plug	1.40
	123	All Appliance Plug	.15
Bryant	668	Universal Appliance Plug with Switch	.85
	669	Switchless	.50
	752	Appliance Plug with Indicating Switch	.60
Cutler-Hammer	7051	Appliance Plug with Switch	.60
G. E.	2602	Armored Heater Plug No Switch	.25
	2633	Large Heater Plug	.20
	2642	Switch "with"	.45
	2699	Small "No"	.25
	2826	"Handy Pull" Heater Plug	.35
Hemco	H250	Switchless Appliance Plug	.50
	H260	Switch	.75
Hotpoint	CD6P1	Iron Plug No Switch	.45
	CD6P1	Armored	.60
	CD7P1	"with"	1.00
Kool-Pull (Noark)	8037	Appliance Plug—No Switch	.75
	8039	"with"	1.00
Propp	5	One 4-All Appliance Plug—No Switch	.30
	52	Iron Plug with Switch	.50
	55	Standard Iron Plug—No Switch	.20
	56	Armored	.30
Reynolite	500	Heater Plug	.40
	510	Switch Heater Plug	.75
Rodale	P-21	Heater Plug No Switch Cold Molded	.20
	P-29	Armored	.25
	450	F tall Heater Plug—No Switch	.45
	610	Bakelite	.25
	615	Armored Heater Plug—No Switch	.35
	850	Iron Plug with Switch	.60
	900	"Armored"	.75
Simplex	990	Armored Plug—No Switch	.75
	990	Deluxe Chromplate Plug	1.00
Sunbeam	A-85	Heater Plug	1.50
Waage		3 & 4 Heat Plug Only	.50
Westinghouse	299423	Appliance Plug—No Switch	.75
	373856	"With"	1.00

PANEL BOARDS OR FUSE CABINETS

FRANK ADAM

All 30 Amp.—S. P.—NEC Fuses	Branch	4	6	8	12
"FBX" Safety Type Fuse Boxes		\$3.80	\$5.60		
"NR" "Main Cable Lug Only				\$8.90	\$11.90
"NR" "Solid Neutral		11.15	13.40	15.60	
NR3G "Main Cable Lug Only				16.50	19.80

All for Plug Fuses	BENJAMIN-STARRETT	4	6	8	10	12
Cat. No. Type and Description		Circt.	Circt.	Circt.	Circt.	Circt.
66104-12 NP —One Fuse & Wire Serv.		\$5.20	\$7.40	\$8.90	\$10.40	\$11.90
66204-12 P —Two Fuse 2 and 3 Wire Serv.		7.50	11.15	13.35	15.60	18.60
66304-12 NEP —One Fuse with Switch Pl.		7.10	10.30	12.80	16.50	19.15
66404-12 EP —Two Fuse with Switch Pl.		10.30	15.25	19.15	21.80	25.15

BULLDOG FUSEMETERS

No. Description	2	4	6	8	10	12
CBS Surface Black Finish with shield	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
BOS "Black Finish without shield	\$1.80	\$2.30	\$3.90	\$7.00	\$9.75	\$10.30
BF Flush Luminized Finish	1.65	2.15				
BBF "Black Finish	2.50	3.70	5.35	8.75	10.30	11.75
BSF "Lum. Finish with Toggle Switches	2.00	2.75	4.70			
BSSF "Lum. Finish with one 30 A. Saftofuse		6.60	9.90	13.20	15.70	19.80
BSSF "Lum. Finish with one 60 A. Saftofuse		20.50	22.00	31.75	33.35	35.00
BKF "Lum. Finish with Pull Box		21.50	22.30	32.25	33.75	35.40
		6.60	9.90	14.85	17.35	19.80

All-Steel-Equip. Co., FUSE CABS

Style & No.	Description	2	4	6	8	12
C-702-4-6	Surface Small Type	Circt.	Circt.	Circt.	Circt.	Circt.
C-902-4-6	Flush Small Type	\$1.80	\$2.55	\$3.95		
3004 to 3074	Surface Type Single Fuse Series D	2.10	2.80	4.85		
3034 to 3094	Flush Type		3.20	5.10	\$7.50	\$10.10
4002 to 4012	Surface Type Double Fuse		3.75	5.60	9.00	12.10
4022 to 4032	Flush Type Double Fuse Series DS		3.20	5.10	10.10	23.00
3304 to 4304	Flush or Surface-Sgl.		3.75	9.00	12.10	27.00
3502 to 4502	Flush or Surface-Double		6.90	9.25	13.80	21.00
			6.90	9.25	21.00	34.50

KILLARK

Standard Flush Type Panels	2	4	6	8	10	12
Series KRP—2 to 12 Inclusive	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
	\$2.00	\$2.90	\$4.75	\$6.50	\$8.50	\$10.75

CUTLER-HAMMER—Fuse Panels—Flush Mounting

Circuits	2 Cir.	4 Cir.	6 Cir.
Black Finish Series 4355 H1 to 6.....	\$ 1.90	\$ 2.60	\$ 4.65
Aluminum Finish Series 4355 H1 to 6.....	2.40	3.45	5.35
Circuits	8 Cir.	10 Cir.	12 Cir.
Black Finish Series 4355 H1 to 6.....	\$ 8.20	\$ 9.95	\$10.20
Aluminum Finish Series 4355 H1 to 6.....	8.65	10.95	11.65

G. E. or TRUMBULL—Residence Panel Boards

Surface or Flush Mounting	4	6	8	10	12
Single No 3104 to 3212	Circt.	Circt.	Circt.	Circt.	Circt.
Flush Mtg. or Fusing					
2906 to 2912					
Surface Mtg.	\$2.80	\$4.55	\$9.65	\$11.25	\$13.00
Double No. 3404 to 3412					
Flush Mtg. or Fusing					
2704 to 2712					
Surface Mtg.	9.10	12.40	18.15	23.10	26.40

SQUARE D—Fuse Cabinets

Series 37000 to 39000	2	4	6	8	10	12
Flush Series 37000 Black	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
	\$1.85	\$2.50	\$4.50	\$7.90	\$9.50	\$11.15
37000 Aluminum		2.35	3.35	5.10	8.30	10.00
Surface Series 39000 Black		1.85	2.50	4.50	7.90	9.50
NOTE: 2 & 4 Circuit Flush Type arranged for mounting direct to front side of studding with channels for lathe ends, each						\$0.20

Combination Fuse Cabinets

60 Amp. Fuse Break and 30 Amp. Circuits	2	4	6	8	10	12
Only	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Flush Mounting Aluminum	\$7.45	\$12.40	\$14.00	\$14.85	\$23.00	
Surface Black		6.45	10.75	11.55	12.40	20.65

WADSWORTH Dead Front Fuse Cabinets

Surface Mtg. Single Fusing	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
	\$2.30	\$3.00	\$4.85	\$5.75	\$7.55	\$11.55
Flush Mtg.—Single Fusing		2.85	3.80	6.10	8.00	10.20
Flush Type for Tgle Sw			6.55	11.10	13.75	16.40

WESTINGHOUSE Junior Residence Type

Junior Residence Panels	2	3	4	6	8	10	12
No. K-64012-21 & 64052-61	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
	\$2.50	\$2.70	\$3.75	\$5.35	\$8.75	\$10.30	\$11.70
Junior Building Panels for Toggle Switches							
No. K-64034-42 & 64074-81		6.00	9.90	13.20	15.70	19.80	

P-SUNDRIES

RUNNING THREAD, PIPE

Price per Foot	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	\$.25	\$.30	\$.35	\$.45		

SOLDERING PASTE

(Also on Page PL-25.)

Make	2 Oz. Cans	2 Oz. Tubes	4 Oz. Cans	Half Pound Cans	One Pound Cans
Allen	\$2.25	\$4.00	\$5.50	\$9.00	\$13.50
Burnley	.20	.30	.40	.65	1.00
Crescent	.25	.40	.60	.90	1.50
G. E.	.25	.40	.60	.90	1.50
Highland	.45	.75	1.25	2.50	
Nokorode	.25	.40	.60	.90	1.50
Star	.25	.40	.60	.90	1.50

PAINT & VARNISH, Insulating

Make	Per Pint	Per Quart	Per Half Gallon	Per Gallon
Armalac Insulating Compound	\$0.50	\$0.75	\$1.25	\$2.50
Ajax Varnish No. 25	.40	.65	1.00	2.00
Enamelac Insulating Varnish	.40	.70	1.25	2.25
G. E. Black Baking or Air Drying	.50	.75	1.25	2.25
G. E. Clear Baking or Air Drying	.50	.75	1.25	2.50
Mineralac Insulating Compound	.40	.75	1.50	3.00
P. & B. No. 2 Paint	.40	.75	1.50	3.00
Pothead Compound, per Pound				.55

CONDUIT WOOD PLUGS

Price Each	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	\$.02	\$.03	\$.05	\$.10	\$.16	\$.26

For Pipe Straps, see Page PL-25. For Solder, Sticks, etc., Page PL-25.

PLATES & PLUGS, RECEPTACLE

PLATES—For Flush Receptacles

All Types	Composition	.040 Gauge	.060 Gauge
Single or Duplex Plate	Lacquer B. Brass	\$0.20	\$0.20
Lift Cover Plate 1 Outlet		.30	.35
Radio Plates—Sgle. or Duplex		.15	.20
Telephone "Double"		.20	.35
Disappearing Door Plate Sgle.		.45	.50
"Duplex"			.75
Chapman Receptacle			.75
Blank Plates One Gang		.20	.30
Bull's Eye and Single Plate		.60	.70
"and 1 Switch Comb.		.70	.75
Switch and Sgle. or Duplex Recept.		.40	.50
Steel Plates for 30 and 40 Amp. Polarized Receptacles			.75
Solid Brass Plates 30 and 40 Amp.			1.50
Screwless Plates Bakelite for Hubbell Receptacles			.55
Porcelain Enameled Plates for Sgle. or Duplex Receptacles			.25
Mirror Glass Plates for Single Receptacle			1.00
Deluxe Metal Plates for Single or Duplex Receptacles			.90
Deluxe Wood Inlaid Plates for Single or Duplex Receptacles			2.35

Blades

	Blades	Price
10 Amp. Pony Composition Cap.....		\$0.10
10 " " Standard .....		.10
10 " " Cap With Extension Knob.....		.20
10 " " Brass Covered Cap.....		.40
10 " " Steel .....		.15
10 " " Cord Grip Cap.....		.25
10 " " Tandem Blade Comp. Cap.....		.30
Radio Jack Plug.....		.50
Chapman Plug Reversible .....		.85
Disappearing Door Plug Brass Top.....		1.00
10 Amp. 2 Wire Polariz. Comp. Cap.....		.25
10 " 2 " Cord Grip Cap.....		.40
20 " 2 " Comp.....		.50
30 " 2 " Cord Grip .....		.75
30 " 2 " Comp.....		.75
30 " 2 " Cord Grip		1.65
10 " 3 " Comp.....		.45
10 " 3 " Cord Grip .....		.65
20 " 3 " Comp.....		.65
20 " 3 " Cord Grip		1.00
30 " 3 " Comp.....		.65
30 " 3 " Cord Grip		1.50
40 " 3 " Heavy Duty Angle Cap.....		2.50
Lamp Only 110 Volts for Bull's Eye Receptacles.....		.65

STANDARD RECEPTACLES OR CONVENIENCE OUTLETS

Without Plates		Plates Extra		Price
Shallow	Comp. Side Wired	Single	.....	\$ .25
		Duplex	.....	.35
	Porc.	Single	.....	.25
		Duplex	.....	.35
Deep	Comp. Top	Single	.....	.40
		Duplex	.....	.60
	Porc.	Single	.....	.40
		Duplex	.....	.60

Plates Extra Except Where Marked "X"

	Price
Plat Extra Except Where Marked "X"	
For Lift Cover Plate Single.....	\$.70
Duplex.....	.70
xWith Rd. Met. Cvr. For 3½ Box Single.....	.80
" " " " " Duplex.....	.45
x " " " " " 4 " Single.....	.35
x " " " " " 4 " Duplex.....	.50
xWith Rd. Brass Plate Small Single.....	1.10
Lugs.....	2
Edison Screw Base Recp. Single.....	.25
Chapman Receptacle.....	.65
Radio Single.....	1.00
Duplex.....	1.35
Disappearing Door Recp. Single.....	.75
Duplex.....	1.10
Screwless Plate Recp. Single.....	.65
Duplex.....	.95
10 Amp. Polariz. For 2 Wire Single.....	.45
20 " " " " 2 " "	1.25
20 " " " " 2 " "	1.40
30 " " " " 2 " "	3.00
30 " " " " 3 " Single.....	1.40
20 " " " " 3 "	2.60
40 " " " " 3 " With Box Cover.....	4.75
40 Amp. Polariz. 3 Wire.....	5.50

No.	Connections	Brass	Bakelite
134	Several loud speakers.....	\$2.50	\$2.60
135	Loud speaker.....	1.00	1.10
136	Aerial and ground.....	1.00	1.10
137	Battery (with plug).....	2.50	2.60
138	Electrical only.....	1.00	1.10
142	Double loud speaker.....	1.15	1.25
238	Loud speaker, aerial and ground.....	2.00	2.20
241	Aerial, ground and elect'l.....	2.00	2.20
242	Loud speaker and elect'l.....	2.00	2.20
243	Aerial, ground and battery.....	2.00	2.20
253	Loud speaker, aerial, ground and elect'l.....	3.00	3.20

Pilot Light-Plate and Single Outlet Comp.....	\$2.00
" " Duplex	3.50
" " Switch and Bull's Eye	3.00
" " Recept. Only With Plate	2.00
Switch and Plate 10 Amp. Sple. Out. Comp.	1.75
20 	2.75
Hubbell Switch Tap Combination Screw Plug #7093-Recep. #7163.....	2.75
Hubbell Switch Tap & Pilot Light Comb. Screw Plug #7317-Recep. #7280	3.13

ALABAX RECEPTACLES AND FIXTURES

Symbol: Column No. 1—Number of Alabax Fixture.
Column No. 2—Resale Price Standard White Glaze Finish.
Column No. 3—Resale Price All Over Color B-D-E-F-G-H-J-K-L-M
Column No. 4—Resale Price Stripe Decoration No. 1A-2A-4A.

Column No. 1 Number	Column No. 2 White	Column No. 3 Color	Column No. 4 Stripe	Column No. 1 Number	Column No. 2 White	Column No. 3 Color	Column No. 4 Stripe
AL 844	\$2.90	\$3.35	.....	AL 849	\$2.30	\$2.60	\$2.70
845	3.20	3.65		850	2.30	2.60	2.70
846	3.45	3.90	\$4.35	851	1.40	1.65	1.80
847	3.75	4.20	4.65	852	2.90	3.35	3.80
848	1.85	2.10	2.30	853	3.20	3.65	4.10

(Concluded in next column)

Column Column Column Column || Column Column Column Column

Column No. 1 Number	Column No. 2 White	Column No. 3 Color	Column No. 4 Stripes	Column No. 1 Number	Column No. 2 White	Column No. 3 Color	Column No. 4 Stripes
AL359	1.85	\$2.15	\$2.30	AL1275	\$0.85	\$1.10	\$1.10
863	1.85	2.15	2.30		.15	.30	.40
864	2.35	2.85	3.25	1300	2.80	3.05	3.25
865	2.70	3.10	3.60	1301	2.80	3.05	3.25
866	2.35	2.85	.....	1349	2.60	2.90	3.10
867	2.70	3.10	.....	1350	2.60	2.90	3.10
869	2.50	2.75	3.00	1351	1.70	1.95	2.15
870	2.50	2.75	3.00	1369	2.80	3.05	3.25
871	1.55	2.25	2.85	1370	2.80	3.05	3.25
872	2.90	3.35	3.85	1371	1.85	2.10	2.35
873	3.20	3.65	4.10	1449	2.70	2.85	3.15
875	2.30	2.60	2.80	1450	2.70	2.85	3.15
808	1.00	1.20	1.40	1451	1.75	2.05	2.25
919	1.65	1.90	2.10	1460	2.85	3.15	3.30
920	1.65	1.90	2.10	1470	2.85	3.15	3.30
921	1.65	1.90	2.15	1471	1.95	2.20	2.40
922	1.65	1.90	2.15	1475	2.65	2.90	3.10
923	2.30	2.60	2.75	1476	2.65	2.90	3.10
924	2.00	2.25	2.45	2007	1.25	1.50	1.70
929	1.95	2.20	2.40	2008	1.35	1.60	1.75
930	1.95	2.20	2.40	2009	1.25	1.55	1.70
949	2.00	2.25	2.45	2010	1.40	1.65	1.90
950	2.00	2.25	2.45	2011	1.05	1.35	1.50
951	1.10	1.35	1.55	2012	1.10	1.40	1.55
952	2.05	2.40	2.80	2013	1.35	1.65	2.00
960	1.00	1.30	1.45	2014	1.65	1.95	2.10
962	2.00	2.25	2.45	2015	1.40	1.65	1.85
969	2.15	2.45	2.60	2371	1.85	2.15	2.35
970	2.15	2.45	2.60	2469	3.20	3.65	4.10
971	1.25	1.50	1.70	2471	2.75	3.20	3.65
980	1.55	1.80	2.00	2669	4.40	4.85	5.30
981	1.40	1.65	1.85	2671	3.95	4.40	4.85
982	1.55	1.80	2.00	2846	3.95	4.40	4.85
983	1.50	1.75	1.95	2847	3.75	4.20	4.65
984	1.35	1.60	1.80	2852	2.90	3.35	3.80
985	1.20	1.45	1.65	2853	3.20	3.65	4.10
989	1.70	1.95	2.15	2854	2.35	2.85	3.25
990	1.75	2.05	2.20	2865	2.65	3.10	3.50
1200	2.00	2.25	2.45	2872	2.90	3.35	3.80
1201	2.30	2.55	2.75	2873	3.20	3.65	4.10
1202	2.00	2.25	2.45	9836	1.90	2.20	2.45
1203	2.30	2.55	2.75	9836	1.90	2.20	2.45
1273	.50	.60	.70	9896	2.10	2.40	2.60
1274	.75	.90	1.00	9906	2.20	2.45	2.60

The above Prices do not include Glassware or Lamps.

STANDARD RECEPTACLES or Lampholders

Keyless Porcelain Standard Base			Unit	Price
			Nos	
Pony Cleat	Receptacle No. S. H. Groove—Side Screws.....		50715	\$0.15
	Round	Center	9171	.20
Standard Cleat		Side	28795	.35
			9402	.30
	With		4013	.40
	Brass Shell		9403	.45
Concealed	No. S. H. Groove.....		4000	.45
			4001	.50
Oblong	With		58300	.55
Round			8105	.45
	Removable Rings.....		50744	.60
Oblong	S. H. Groove for Midg.....		4026	.60
Mogul-P & S No. 520—Arm	5012—Hucell 3464—G.E. 1104		5012	.85
Miniature or Candelabra	Receptacle (Small Type).....		9404	.25
	Extended Type.....		360-7	.25

Porcelain Pull for 3 $\frac{1}{4}$ & 4" Box.....	\$1.80
--	--------

Brass Shell	For 3 1/4" & 4" Box	1.8
Porcelain Keyless for	3 1/4" Box	2.0
"	3 1/4" & 4" Box	.4
"	Wpf. for 3 1/4" Box	1.0
Brass Shell	For 3 1/4" & 4" Box	1.0
Porc. Rec. Metal Cover for	3 1/4" Box	.2
"	Wpf. 3 1/4"	.3
"		.3

10 Amp. Standard Receptacle.....	\$0.50
----------------------------------	--------

10					.5
10	Receptacle with Covered Term.....				.5
20	Polarized Conduit Receptacle.....				.8
10	Sgle. Porc. Rec. for 3/4" Box.....				.4
10	Duplex " " " 3/4" "				.5
10	Sgle. " " " 4" "				.6
10	Duplex " " " 4" "				.7

10 A. Small Concealed	2 Wire.....	\$.4
10 A. Small Concealed	2 Wire.....	\$.4

10 A. Small Cleat	2	11	1.4
10 A. For Wood Molding	2	11	1.4
10 A. Polarized Cleat	2	11	1.4
10 A. Polarized Concealed	2	11	1.4
10 A. Polarized Wood Molding	2	11	1.4
10 A. Fielding Receptacle	2	11	1.4
10 A. Polarized Concealed	3	11	1.7
20 A. Polarized Cleat	2	11	1.4
20 A. Polarized Concealed	2	11	1.4
20 A. Polarized Wood Molding	2	11	1.4
20 A. Polarized Concealed	3	11	1.7
30 A. Polarized Composition	2	11	1.4
40 A. Polarized Porcelain	2	11	1.4
40 A. Polarized Composition	2	11	1.4
For Sub. Base for 40 Amp. Rec.	2	11	1.4

HEAVY DUTY WEATHERPROOF SOCKETS—Continued

Shadeholders for above sockets.	Price
3/4" Aluminum or Copper Extra	\$0.35
3/4" " " " "	.50
3/4" " " " "	.65

HEAVY DUTY SOCKETS—Benjamin

HEAVY DUTY SOCKETS—Benjamin		Price Each
Benco Keyless Socket with Clamp Ring #4700 to 4703 Medium Base		\$1.25
" " without " " 4712 to 4715 " "		1.05
" " Pull " " with " " 4706 to 4709 " "		2.00
Benco Keyless Socket Copper or Alum. #4200-1-4-5 & 4335 & 7		.75
" " Brass #4202-4203-4336		.90
" " Pull " " 4207-8 4225-26 4236-37 Brass, Copper or Alum.		1.50
" " Mogul " " Copper Clad #4210-4207		2.00
Benco Threaded Holders Only		
Polish. Alum. Weathpr—#4215 & 4217	23½"	34½"
Copper " " —4370-72 & 73	.35	.60
Brushed Brass " " —4377-79 & 80	.40	\$1.00
		.60 1.00

BENJAMIN MOGUL SOCKETS

With 1/4" or 3/4" Iron Yoke	With 1/4" or 3/4" Alum. Yoke
One Piece Socket with Lamp Grip	\$1.00 \$1.15
Two Piece Socket with Lamp Grip	1.20 1.45

BENJAMIN REFLECTOR SOCKETS

Porcelain or Similar	With Type X or XR Fitting
Medium Base Keyless Tapped 3/4"-1/4" No. 4650-51 & 65	\$1.20
" " Self-Locking 3/4"-1/4" No. 4528-29-30-32-33	1.60
" " Shock Absorb. 3/4"-1/4" No. 4676-77-78-80-81	1.45
" " Shock Absorb. Self Lock No. 4648-49-50-52-53	1.90
" " Pull Chain No. 4534-35 & 4660-61-67	2.05
Mogul Base Keyless Shock Absorb. No. 4670-71-72	1.95
" " Not Shock Absorb. No. 4656-57 4666	1.65
If X or XR Fitting not supplied on above sockets deduct	.45

SWITCHES, FLUSH TUMBLER

Plates & Boxes Extra	Price
Square Handle Porcelain Cup—Sgl. Pole	\$.35
" " Dble.	1.00
" " 3 Way	.50
" " Composition Cup—Sgl. Pole	3.00
" " Dble.	1.40
" " 3 Way	1.35
20 Amp. Sgl. Pole	2.40
20 Amp. Dble. Pole	1.50
Round Handle Porcelain Cup—Sgl.	1.60
" " Dble.	.35
" " 3 Way	1.00
" " 4	3.00
New Circuit Type	
Twin-2 Sgl. Pole Switches	\$1.35
Twin-1 Sgl. Three Way	1.50
Twin-2 Sgl. 3 Way Switches	1.65
Triplet-3 Sgl. Pole Switches	2.00
Triplet-2 Sgl. & 1-2 Way Switches	2.20
Lock Type Porcelain Cup—Sgl. Pole	1.50
" " Dble.	2.20
" " 3 Way	1.85
EXTRAS—For Luminous Tip add for Each Handle	.40
For Glo Guide Handle Switches add for Each	1.00

TUMBLER SWITCH COMBINATIONS

Description	Price
10 A. D. P. Switch—Pilot Lt.—.060 Plate	\$3.00
10 " " " " Receptacle " "	1.75
20 " " " " 15A " "	2.50
Switch—Tap & Pilot Light with " "	3.35
" " & Receptacle " "	1.75

PLATES For Tumbler Switches

	1	2	3	4
Stamped Brass Sprayed Finish .040 Thick.....	\$.15	\$.30	\$.45	\$1.10
" " Brush Brass .040.....	.20	.40	.60	1.35
" " Sprayed .060.....	.25	.50	.75	1.35
" " Brush Brass .060.....	.30	.60	.90	1.60
Bakelite or Composition Molded.....	.20	.40	.60	1.10
Twin & Triple B. B. or Bakelite Plates.....	..	.25	.25	..
Comb. Switch and Recept.—Moulded Comp.....	.30	.40	..	..
" " Pilot Light.....	.75	..	..	..
Hubbell Bakelite Screwless Plates.....	.60	1.10	1.60	2.25
Bryant DeLuxe Wood Inlaid any Finish.....	2.75	4.70	7.40	..
" " All Metal.....	1.00	1.75	2.45	..
Guth Porcelain Enamel Plates.....	1.00	1.00	1.00	..
Glass Mirror Plates.....	1.00	1.75	2.50	3.25
Blank Plate .040 Brush Brass Finish.....	.30	.60	.90	..

SWITCHES, FLUSH PUSH

Plate & Boxes Extra	Price
Standard Shallow Type Porcelain Cup—Single Pole	\$0.35
" " Double	1.00
" " 3 Way	.60
Deep Type Porcelain Cup—Single Pole	.75
" " Double	1.15
" " 3 Way	3.30
Special High Grade Composition Cup—Single Pole	1.40
" " Double	1.70
" " 3 Way	1.70
" " 4	3.70

Plate and Boxes Extra—Continued

Lock Type Porcelain Cup—Single Pole.....	\$1.50
Double	2.20
3 Way	2.20
4	3.80
Electroler Non-Indicating.....	1.75
Indicating.....	1.90
Extra for Luminous Button Add Per Switch.....	.40

PUSH SWITCH COMBINATIONS

With Plates	Price
Bryant 117 D. P. Indic. Switch Flush Receptacle & .060 Plate	\$2.35
413 One Push Switch—Bulls Eye and Solid Plate	4.50
518 " " Disap. Door Recp. Bulls Eye—Solid Plate	5.25
465 " " D. P. Flush Switch & Pilot Lamp .060 Plate	3.65
467 " " Flush Switch—Flush Recept.—Bulls Eye—Solid Plate	5.75
558 " " Duplex	6.60

PLATES For Flush Push Switches

Description	1 Gang	2 Gang	3 Gang	4 Gang
Stamped Brass Sprayed Finish .040 Thick	\$.15	\$.20	\$.25	\$.30
" " Brush Brass .040	.20	.40	.60	1.35
" " Sprayed .060	.25	.50	.75	1.35
" " Brush Brass .060	.30	.60	.90	1.60
Bakelite or Composition	.20	.40	.60	.80
Bryant DeLuxe Plates Wood Inlaid	2.75	4.70	7.70	...
" " All Metal	1.00	1.75	2.45	...
Guth Porcelain Plates	.25	.60	1.00	...
Glass Mirror Plates	1.00	1.75	2.50	3.25
Blank Plate .040 Brush Brass Finish	.30	.60	.90	...
Combination Switch & Receptacle Moulded	.30	.40	...	...
" " Push & Recept. Plates .060 Brass	.50	.60	...	...
" " " " Guth Enamel	.65	...	...	...
" " " " Mirror Glass	1.75	...	...	...

SWITCHES, SURFACE SNAP

METAL COVERED SNAP SWITCHES

Poles	Volts	Type	Size	5 Amp.	10 Amp.	20 Amp.	30 Amp.
Single	125	Non-Indicating	Pony	\$.35	...	...	...
"	"	Indicating	"	.40	...	...	...
"	"	Non-Indicating	Standard	.60	.75	\$1.40	\$2.15
"	"	Indicating	"	.65	.85	1.55	2.30
Double	250	Non-Indicating	"	.90	1.05	2.20	2.85
"	"	Indicating	"	1.00	1.20	2.40	2.90
Triple	"	Non-Indicating	"	...	2.95	3.75	4.50
"	"	Indicating	"	...	3.10	3.85	4.65
3-Way	125	Non-Indicating	"	.90	1.50	2.40	2.90
4-Way	"	Non-Indicating	"	1.35	3.00	6.50	...
Electroler	"	Non-Indicating	"	1.45	1.45	2.20	...
"	"	Indicating	"	1.65	1.65	2.35	...

ALL PORCELAIN SNAP SWITCHES

Poles	Volts	Type	Size	5 Amp.	10 Amp.	20 Amp.	30 Amp.
Single	125	Non-Indicating	Pony	\$.55	...	...	...
"	"	Indicating	"	.60	...	...	...
"	"	Non-Indicating	Standard	.65	.90	\$1.65	\$2.40
"	"	Indicating	"	.75	1.00	1.80	2.55
Double	250	Non-Indicating	"	.95	1.20	2.40	2.90
"	"	Indicating	"	1.10	1.35	2.60	3.00
3-Way	125	Non-Indicating	"	.95	1.35	2.60	3.00
4-Way	125	Non-Indicating	"	1.50	3.05	...	...
Electroler	125	Non-Indicating	"	1.50	1.50	...	...
"	"	Indicating	"	1.70	1.70	...	...

TUMBLER OR TOGGLE SNAP SWITCHES

Metal or Composition Covers	Single Pole	Double Pole	3 Way Pole	4 Way Pole
125-250 Volt				
5 Amp. Closed or Slott. Base	\$.35	.85	.80	\$1.40
5 Amp. with Outlet Box Cover	.55	...	.90	...
10 Amp. Closed or Slott. Base	.80	1.10	1.25	...

SNAP SWITCHES FOR WOOD MOLD, CONDULETS, ETC.

Metal Covered	Non-Indicating	Indicating	Indicating	Indicating
Single Pole	5 Amp. 125 Volts	.65	.60	.75
Double	"	1.20	1.10	1.15
Three Way	"	1.00	1.20	...
Electroler	"	1.50	1.50	...


PARTS FOR SNAP SWITCHES

Handles—Standard Type Each \$.12—Ratchet Type.....	\$.30
Bases—Porcelain 5 Amp. \$.12—10 Amp. \$.15—20 Amp.....	.30
Covers—10 Amp & Under Metal \$.15—Porcelain.....	.20
Over 10 Amp. .30 .....	.30

SWITCHES, PULL CORD, CHAIN, CANOPY, LEVOLIER, ETC.

PULL CORD SWITCHES—BODIES ONLY

Small Socket Type	Price
Ceiling—Bottom Pull	\$0.95
Wall—Side Pull	.95
Rosette—Side Pull	.95
Fixture—Bottom Pull	1.25
1/4" Brass Cap	.10
3/4" Brass Cap	.30
1/2" Brass Cap	.20
Small Cleat Base	.30
Small Slotted or Concealed Base	.35
Large Concealed Base	.40
Wood Moulding Base	.35
Small Box Base Brass Covered	.50
3/4" Box Base Brass Covered	.65
3/4" Box Base Brass Covered	1.10
3/4" Box Cover with Ring	.20
4" Box Cover with Ring	.25



Throughout the Nation, leading architects and engineers unhesitatingly specify Atlantic Triton (Intermediate) and Atlantic Neptune (30%) where the correct choice of building materials is a test of good judgment.

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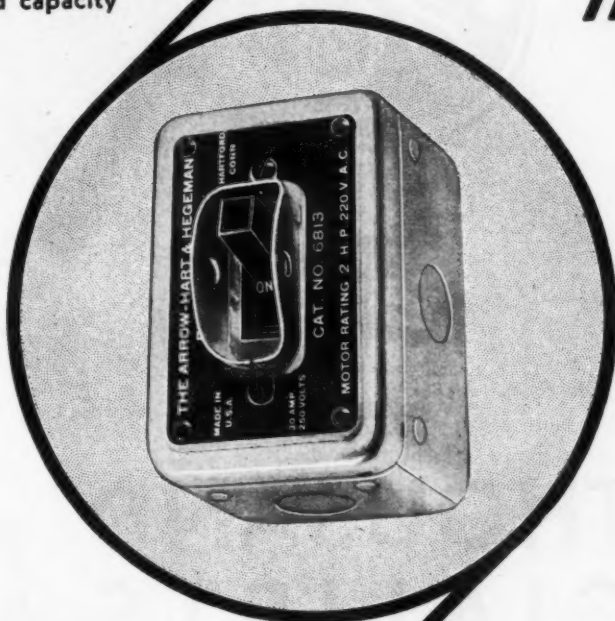


ARROW LINE STARTING SWITCHES *for motors*

Heavy initial overload capacity

Double or Triple Pole;

$\frac{3}{4}$ to 2 Horsepower



NEWLY AND ESPECIALLY DESIGNED for Normal and High Torque Low Starting Current Line-Start Motors. . . Can be used to start all motors up to rated capacity. Metal parts and insulation built "over-size" to withstand the ruinous current-surge and initial overloads in starting machines. ♦ ♦ ♦ ♦

THE MECHANISM combines high initial-surge capacity with a high degree of mechanical capacity for hard usage. . . Special lever construction, easy to work, with positive "kick-off" release. Small in size, the switch can be mounted on any machine where handiest to operator. Enclosed in cadmium-plated box with conduit knock-out holes; handle protected by metal guard with provision for locking. The LOWEST COSTING installation of any switch for motor starting. . . . Approved by Underwriters for Horsepower Rating; catalog number on each housing. ♦ ♦ ♦ ♦ ♦

Available in Double or Triple Pole; $\frac{3}{4}$ to 2 Horsepower, 220 to 660 Volts. Ask for specification data or tell us your requirements.

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GENERAL OFFICES

BRIDGEPORT, CONNECTICUT



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20 Years Ago

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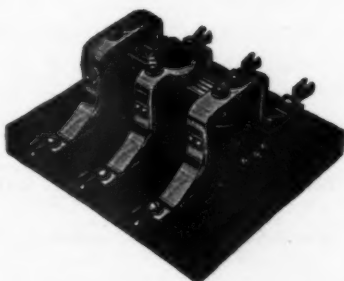
Several hundred "Diamond H" Remote Control Switches were installed to control the lighting circuits, throughout the building.

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A letter from a library official states:

"And they have now had twenty years of use and abuse and should be replaced with your modern types."

This company has always maintained the same high standards of quality and workmanship, set by Gerald W. Hart when he built his first electric switch in 1890.



THE HART MANUFACTURING COMPANY
HARTFORD, CONNECTICUT

BOSTON NEW YORK PHILADELPHIA DETROIT CHICAGO CLEVELAND DALLAS
MINNEAPOLIS TORONTO, CANADA SAN FRANCISCO LOS ANGELES SEATTLE

DIAMOND H SWITCHES

METER SERVICE SWITCHES—Continued

NON-METER TEST TYPE

Number	Amps.	Pole	Fused	Neutral	Description	Price
26311	30	3	2	Plug	Plug Type Fuse Dead.....	\$ 2.58
26351	30	3	2	Cart.	Cart. Type Fuse Dead.....	4.05
SK-659	30	3	2	Cart.	Cart. Type Fuse Dead.....	4.60
SK-660	60	3	2	"	Cart. Type Fuse Dead.....	11.70
SK-674	100	3	2	"	Cart. Type Fuse Dead.....	19.20

POLYPHASE METER SERVICE SWITCHES

"Square D" Accessible Main Fuse Type

METER TEST TYPE

Number	Amp.	Pole	Fused	Price
30391	30	3	3	\$10.65
30392	60	3	3	20.35
30393	100	3	3	30.00

NON METER TEST

Number	Amp.	Pole	Fused	Price
10391	30	3	3	\$10.05
10392	60	3	3	18.60
10393	100	3	3	28.25

"Square D" Sealable Main Fuses

METER TEST TYPE

Number	Amp.	Pole	Fused	Price
36351	30	3	3	\$11.60
36352	60	3	3	17.80
36393	100	3	3	26.50

NON METER TEST

Number	Amp.	Pole	Fused	Price
SK-671	30	3	3	\$ 4.60
SK-672	60	3	3	11.70
SK-673	100	3	3	19.20

FITTINGS FOR STANDARDIZED SWITCHES

	Price
End Walls for 30 Amp. Switches.....	\$.30
60 & 100 Amp. Switches.....	.80
Trough Closing Plates No. 20533 & 34.....	.10
Connecting Trough No. 20733—34, Long.....	.45
Universal End Wall & Shutters.....	.80
Meter Shutter only No. 24355.....	.15

OUTDOOR METER BOXES

	Enam.	Galv.
SK2158 with Test Block.....	\$7.05	\$9.55
SK2186 without Test Block.....	4.85	7.30

TYPE C

"Square D" Single Throw, Industrial Switches
Quick Break Only

Amps.	250 Volts Fusible	3 Pole	575 V. AC with Arc Suppres.	Fused and Unfused.
30	\$85251 \$3.20	\$85351 \$ 5.20	30 575V. Fused.....	46341 \$10.95
60	\$46252 \$5.20	\$46352 10.00	30-60 575V. Not Fused.....	41342 10.95
60	Solid Neutral #47312	9.10	60 575V. Fused.....	46342 13.65
100	\$45253 \$12.75	\$45353 15.50	100 575V. Not Fused.....	41343 17.30
100	Solid Neutral #48313	14.60	100 575V. Fused.....	46343 21.85
200	\$46254 \$20.00	\$46354 26.40	200 575V. Not Fused.....	41344 29.15
200	Solid Neutral #47314	22.75	200 575V. Fused.....	46344 38.25

TYPE A WITH ARC SUPPRESSORS

"Square D", Industrial Quick Make & Break, Single Throw

Amps.	230 V. DC. and AC. Fusible	2 Pole	250-600 V. DC. and 575 V. AC. Unfused	3 Pole
x30	.....	.....	x30 #81252 \$ 9.55	#81351 \$11.40
60	#86252 13.65	#86352 18.20	30-60 #81262 12.75	#81342 15.95
100	#86253 20.90	#86353 27.30	100 #81263 20.95	#81343 24.10
200	#86254 36.40	#86354 40.95	200 #81264 28.20	#81344 34.60
x60 Amp. Sw. with 30 Amp. Spacing			(x=250 Volts only).	

30 AMP. TYPE C

"Square D", Quick Break, Industrial, Single Throw

No.	250 Volts	2 Pole	Description	No.	Single Throw
89251			Quick Make & Break	89351	\$ 5.20
91251			Not Quick Break	91351	4.00
x90251			Quick Break Only	x90351	10.00
			(x 60 Amp. Switches with 30 Amp. Clips).		

MOTOR STARTERS

"Square D", Quick Make & Break, Single Throw

Numbers & Types	Amps.	Volts	2 Pole	3 Pole	4 Pole
76251-351-451 Cover Control.....	30	250 V.	\$15.50	\$16.40	\$22.75
76352-76452	60	250 V.	22.75	31.85	
76341-76441	30	575 V. AC.	22.75	31.85	
76342	60	575 V. AC.	32.75		
69251-351-451 without Cover Cont..	30	250 V.	13.65	14.60	20.95
69352-69452	60	250 V.	20.95	30.00	
69341-69441	30	575 V. AC.	20.95	30.00	
69342	60	575 V. AC.	31.00		
75251-351 Time Protective.....	30	250 V.	6.40	6.85	
75341 & SK2054 Time Protective...	30	575 V. AC.	11.85	13.65	
No. 98251 For Small AC & DC Motors up to 1/4 H. P. 220 Volts AC..					1.85

TYPE "C" SWITCHES

Cutler-Hammer (T-V) Single Throw Industrial Type
Series 4131

250 Volts DC or AC Fusible				575 Volts		AC Fusible	
Amps	2 Pole	3 Pole		Amps	3 Pole	4 Pole	
30	4131H2 \$ 3.20	4131H13 \$ 5.20		30	4131H24 \$10.90	4131H34 \$18.20	
60	4131H3 8.20	4131H14 10.00		60	4131H25 13.65	4131H35 20.00	
100	4131H4 12.75	4131H15 15.50		100	4131H26 21.85	4131H36 36.40	
200	4131H5 20.00	4131H16 26.40		200	4131H27 38.25	4131H37 51.90	
400	4131H6 49.15	4131H17 67.35					

Amps	125-250 Volt Solid Neut. Fusible	2 Pole	3 Pole	Non-Fusible Type 250 DC 500-600 AC
30	4131H39 \$ 6.75	4131H44 \$ 8.20	x30 4131H54 \$ 3.20	4131H58 \$ 4.10
60	4131H40 9.00	4131H45 11.40	60 4131H55 8.20	4131H59 8.65
100	4131H41 14.60	4131H46 20.50	100 4131H56 10.90	4131H60 12.30
200	4131H42 22.75	4131H47 31.85	200 4131H57 19.10	4131H61 22.75
400	4131H43 63.70	4131H48 82.00	x30 Amp 250 Volts Only	

ENTRANCE SWITCHES, LIGHT TYPE

Cutler-Hammer (T-V)

Amps	Description	Numbers	Price	Numbers	Price
30	For Plug Fuses.....	4141H1&2	\$ 1.65	4141H2-4	\$ 2.90
30	2 Blades-2 Fuses.....			4141H5	2.25
30	For Cartridge Fuses.....	4141H6&8	1.80	4141H9-10	3.60
30	For Cartridge Fuses.....	H4141H7	2.75		
30	For 2 Cart. Blades-2 Fuses.....			4141H11	3.25
30	Non-Fusible.....	4141H23	2.35	4141H24	4.10
60	For Cartridge Fuses.....	4141H13	6.70	4141H14-15	7.80
60	For 2 Blades & 2 Fuses.....			4141H16	7.45
100	For Cartridge Fuses.....	4141H18	10.30	4141H19-20	12.65
100	For 2 Blades & 2 Fuses.....			4141H21	11.90

METER SERVICE SWITCHES

Cutler-Hammer (T-V) Without End Walls

Meter Test Type	Live Fuse Type	Without End Walls
30	For Plug Fuses.....	4307H1&5 \$ 2.95 4307H9 \$ 3.70
30	For Cartridge Fuses.....	4307H2&6 3.30 4307H10 4.05
60	For Cartridge Fuses.....	4307H3&7 8.45 4307H11 8.90
100	For Cartridge Fuses.....	4307H4&8 15.05 4307H12 16.00
	Dead Fuse Type	
30	For Plug Fuses.....	4309H1 2.40 4309H3 3.70
30	For Cartridge Fuses.....	4309H4 3.80 4309H6 4.30
60	For Cartridge Fuses.....	4309H7 12.00 4309H9 13.75
100	For Cartridge Fuses.....	4309H10&11 21.20 4309H12 23.00

SAFE-LOCK METER SERVICE SWITCHES

Cutler-Hammer (T-V) Without End Walls

Accessible Main Fuses	Test Type	Without End Walls
30	For Plug Fuses.....	4325H1&2 \$ 4.00 4325H3 \$ 4.50
30	For Cartridge Fuses.....	4325H4&5 4.80 4325H6 4.80
60	For Cartridge Fuses.....	4325H7&8 15.05 4325H9 15.95
100	For Cartridge Fuses.....	4325H10&11 23.85 4325H12 25.60
	Non-Test Type	
30	For Plug Fuses.....	4327H1&2 3.65 4327H3 4.00
30	For Cartridge Fuses.....	4327H4&5 4.60 4327H6 4.60
60	For Cartridge Fuses.....	4327H7&8 14.15 4327H9 15.00
100	For Cartridge Fuses.....	4327H10&11 23.00 4327H12 24.00

POLYPHASE

Meter Service and Entrance Switches

All 230 V.—A. C.	Description	30 A	60 A	100 A	200 A
Sealed Fuses-Meter Test 3 Phase 3 Wire..		\$11.35	\$17.00	\$27.30	\$57.20
Access.	"	13.85	33.45	50.15	90.65
"	"	11.45	21.15	30.80	66.00
"	"	15.60	37.00	53.70	98.60
"	"Non	10.85	19.35	29.05	48.40
"	"	11.45	21.15	30.80	56.35

UNIVERSAL METER SERVICE SWITCHES

Cutler-Hammer (T-V)

No.	Without End Walls	Price
4311H1	All 30 Amp. Standardized Meter Service Switches	\$3.70
4311H2	Branch Circuit Type.	4.00
4311H3		4.60

For Detailed Description See Cutler-Hammer (Trumbull Vanderpool) Catalog.

SHUTTERS END WALLS

Cutler-Hammer (T-V)

	30 Amp.	60 & 100 Amp.
Single Piece End Wall used with Cabinet.....	\$.35	\$.80
Shutters for Shutter Type End Wall.....	.15	.30
Conduit End Wall.....	.35	.80
Universal End Wall.....	.35	....

TYPE "A" SWITCHES

Single Throw—Series 4111

Fusible 250 Volt DC or AC				Fusible 575 Volt AC			
Amps.	2 Pole	3 Pole		Amps	2 Pole	3 Pole	
30	4111H1	\$10.90	4111H20 \$13.65	30	4111H11	\$16.40	4111H30 \$20.00
60	4111H2	13.65	4111H21 18.20	60	4111H12	17.30	4111H31 20.95
100	4111H3	20.95	4111H22 27.30	100	4111H13	27.30	4111H32 31.85
200	4111H4	36.40	4111H23 41.00	200	4111H14	42.80	4111H33 52.80
400	4111H5	68.25	4111H24 91.00	400	4111H15	100.00	4111H34 109.20
				Non-Fusible 250 DC or 500-600 AC			
				Amps	2 Pole	3 Pole	
				x30	4111H74	\$ 9.55	4111H84 \$11.40
				30-60	4111H75	13.65	4111H85 15.95
				100	4111H76	20.95	4111H86 24.10
				200	4111H77	28.20	4111H87 34.60
				400	4111H78	81.90	4111H88 91.00
				1250 V. only.			

Switches

Manual Operated

T-V

Series	Description	Amps	Volts	2 Pole	3 Pole	4 Pole
4151H1	Light Duty Motor Sw. 3/4HP or Less.....	30	115	\$ 1.65		
9115H1	Motor Switch with Thermal Cutout.....	30	250			
4231H	For infrequent Duty.....	30	550		\$13.90	\$19.30
4241H	For infrequent Duty 5 HP.....	30	550	6.50	6.85	8.75
4242H	For infrequent Duty 7 1/2HP.....	30	550	12.55	13.20	16.65
4243H	For infrequent Duty 7 1/2HP.....	60	440	19.40	19.65	23.65
4245H	For infrequent Duty 7 1/2HP.....	60	220	17.30	19.65	26.85

Trumbull Electric Closed or Open Ends

Numbers	Amps.	Volts	Fusing	2 Pole	3 Pole
5790 EW Porc. Base.....	30	125	For 1 Plug Fuse.....	\$1.65	\$3.45
5791-2-3-4 & 5803.....	30	125	1 Plug Fuses.....	1.85	2.40
5801-5892 Porc. Base.....	30	125-250		1.85	2.40
13640-13641 Kappa.....	30	250	No Fuse-Slate Base.....	2.75	4.10
13642-43 & 13743 Kappa.....	30	250	For Enclosed Fuses.....	2.75	4.35
13321-13331 Quick Break.....	30	250		3.65	6.20

Trumbull Electric Single Phase or DC Solid End Plate

16361 to 16368.....	30	125-250	For Plug Fuses.....	\$3.80	\$4.10
16371 " 16378.....	30	" "	" Enclosed Fuses..	3.65	4.40
16381 " 16388.....	60	250	" " "	9.25	9.70
16391 " 16398.....	100	250	" " "	15.85	16.75

Trumbull Electric For Meter Testing Open End

Without End Walls					
16300 to 16309.....	30	125-250	For Plug Fuses....	\$ 2.95	\$ 3.75
16315 " 16324.....	30	" "	Enclosed Fuses.	3.35	4.10
16330 " 16338.....	60	" "	" "	8.45	8.90
16341 " 16348.....	100	" "	" "	15.05	15.95

Trumbull Electric With Test Blades With and Without

End Walls				
18111.....	30	125	For 1 Plug Fuse.....	\$ 3.55
18211-18311.....	30	125	Plug Fuses.....	4.05 \$4.55
18121.....	30	125-200	1 Enclosed Fuse.....	3.95
18221-18321.....	30		Enclosed Fuses.....	4.90 4.90
18122-222-322.....	60	"	"	15.50 16.75
18123-223-323.....	100	"	"	24.65 26.40

Without Test Blades

†19111.....	30	125	For 1 Plug Fuse.....	\$ 3.35	.....
†19211-19311.....	30	125-250	1 Plug Fuses.....	3.70	\$4.05
†19121.....	30	•	1 Enclosed Fuse.....	3.95	.....
†19221-19321.....	30	•	Enclosed Fuses.....	4.65	4.65
†19122-222-322.....	60	•	•	14.50	15.85
†19123-223-323.....	100	•	•	23.35	24.65
†No End Walls.....			†With End Walls.....		

Trumbull Electric With Test Blades With and Without

End Walls				
#15827	30	125	For 1 Plug Fuse....	\$ 2.40
#2811-28211-28311.....	30	125	" Plug Fuses.....	\$ 3.55
#28121	30	125	" 1 Enclosed Fuse	3.85
#28221-28321.....	30	125-250	" Enclosed Fuses.	4.10 4.35
#28122-28222-28322.....	60	"	"	13.25 14.60
#28123-223-323.....	100	"	"	22.00 23.75
Without Test Blades				
#29111.....	30	125	For 1 Plug Fuse....	\$ 3.10
#29121-29311.....	30	125-250	" Plug Fuses.....	3.10 \$ 3.30
#29121	30	125	" Enclosed Fuse	3.45
#29221-29321.....	30	125-250	" Enclosed Fuses	3.75 3.78
#29122-29222 & 322.....	60	250	" Enclosed Fuses	12.35 13.65
#29123-223 & 323.....	60	250	" Enclosed Fuses	20.70 22.00
No End Walls.		With End Walls.		

Trumbull Electric Without End Walls

971-123.....	30	125	For 1 Plug Fuse.....	\$3.75	.....
972-123.....	30	125	For 1 Plug Fuse.....	4.70	.....
973-333.....	30	125	For 2 Plug " Solid Neu.....		\$4.10
975-333.....	30	125	For 3 Combinations....	5.30	5.30
979-333.....	30	125	For 4 Combinations....	5.30	5.30

Trumbull Electric

Series Nos.	Style	30 Amp.		60 Amp.	
		3 Wire	4 Wire	3 Wire	4 Wire
16379	Entrance—"DO-ALL"	\$ 4.70			
15321-15623	Acc. Fuse—Test Conn.	11.60	\$15.60	\$21.10	\$37.00
17321-17623	Acc. Fuse without Test Conn.	10.95	12.80	19.40	22.00
26321-26623	Sealed Fuse with Test Conn.	11.50	14.40	17.60	33.50

Series Nos.	Style	100 Amp.	
		3 Wire	4 Wire
15321-15623	Acc. Fuse—Test Conn.	\$37.50	\$47.50
17321-17623	Acc. Fuse without Test Conn.	29.05	33.45
26321-26623	Sealed Fuse with Test Conn.	37.30	44.00

Trumbull Electric

	30 A.	60 A.	100 A.
End Wall One Piece for Standardized Switches.....	\$.30	\$.80	\$.80
End Wall One Piece for Polyphosphate Switches.....	.30	.80	.80
Shutters for End Walls for Standardized Switches.....	.15	.30	.30
Shutters for End Walls for Polyphosphate Switches.....	.15	.....	.....
Troughs 2-3' & 4'.....\$.40	5'.....\$.45	6'.....\$.50	7'.....\$.55

Electrical Contracting, December, 1930

Trumbull Single Throw, Quick Make & Break

Amp	230 Volts Fusible			230 Volts—No Fuse	
	2 Pole	AC-DC	3 Pole AC Only	2 Pole	AC-DC
30.....	72221	\$10.95	72321	\$13.05	36221 \$ 9.60
60.....	72222	13.65	72322	18.90	36222 11.85
100.....	72223	20.95	72323	27.30	36223 20.00
200.....	72224	36.40	72324	41.00	36224 25.50

Amp	Fusible		No Fuse	
	2P. 230-575 AC & DC	3P. 230-575 AC Only	2P. 575V AC & DC	3P. 230-575 AC Only
30.....	72261 \$16.40	72361 \$20.00	36261 \$12.75	* 36321 \$11.40
60.....	72262 17.30	72362 21.00	36262 13.65	36362 15.95
100.....	72263 27.30	72363 31.85	36263 20.95	36363 24.10
200.....	72264 43.25	72364 52.80	36264 28.20	36364 34.10

Trumbull Single Throw, Quick Make & Break

Amp	230 V. Fusible			230 V. No Fuse				
	2 Pole	AC-DC	3 Pole	AC Only	2 Pole	AC-DC	3 Pole	AC
30.....	40221	\$ 5.50	40321	\$ 6.85	20221	\$ 5.00	20321	\$ 6.40
60.....	40222	8.20	40322	10.00	20222	8.20	20322	8.65
100.....	40223	12.75	40323	15.50	20223	12.75	20323	13.30
200.....	40224	20.00	40324	26.40	20224	19.10	20324	22.75

Amp	Fusible		Solid Neutral					
	2P.	230 AC-DC	3 Pole	VAC	3 Pole	Blades	3	Blades
30.....	44222	\$ 6.65	44322	\$10.50	43322	\$ 9.55	43422	\$11.85
60.....	44223	13.25	44323	18.00	43323	15.00	43423	18.00
100.....	44224	20.00	44324	26.85	43324	23.20	43424	32.30

ALL 30 AMP. PORCELAIN BASE

	2 Pole	3 Pole
"Midget"—S. N.—1 Blade—1 Fuse—#62612 & 62613	\$1.65	
"Type 00" Fusible—125-250 V.—Plug Fuses. 60969	1.65	#60961 \$3.00
—S. N.	60091	1.65
—S. N. 3 Blades		62328 2.70
—Not Fusible—3 Blades—250 Volt. 60990	2.55	60902 3.00
—Fusible Cart. Fuses—250 V. 60989	2.45	62363 4.30
—S. N. 250 V.		62351 3.20
—S. N. 3 Blades		62364 4.30
"Type WK-45" Fusible Cart. Fuses—3 Blades—250 V.		545101 5.20
"Type WK-45" S. N. Fusible Cart. Fuses—2 and 3 Blades—250 V.	545301	5.20
"Type WK-45" Non-Fusible—2 and 3 Pole—3 Blades.	545001	4.20

Westinghouse "WK-62" Quick Break

	2 Pole Fusible	3 Pole Fusible	4 Pole Fusible
60 Amp.—230 Volts.....	62304	\$ 9.15	62305 \$10.00
100 " —230 "	62308	13.60	62309 17.25
200 " —230 "	62312	21.80	62313 29.05
			62315 47.20

	2 Blades—2 Fuses	3 Blades—2 Fuses
60 Amp.—3 Poles.....	#62332 \$ 9.15	#62306 \$10.90
100 " —3 "	62330 14.55	62310 17.25
200 " —3 "	62331 22.70	62314 29.00

UNIVERSAL METER SERVICE SEALED MAIN FUSES

One & Two Circuit		Four Circuit
57924	\$3.70	57925 \$5.00
57926	4.05	57499 4.60
57928-31	3.60	57928 3.60
57498	5.25	57500 5.25

Westinghouse "WK-54" Without End Walls

Amps.	Fused For	Dead Fuse Type 2 Pole		3 Pole		Live Fuse Type 2 Pole		3 Pole	
		No.	Price	No.	Price	No.	Price	No.	Price
30	Plug	61140	\$ 2.40			60224	\$ 2.95	59442	\$ 3.70
30		61143	3.50	61142	\$ 3.75	59441	2.95	60225	3.70
30	Enclosed	61639	3.80			54371	3.30	60227	4.05
60		61145	4.40	61144	4.30			60445	4.05
60		61150	12.80	61151	13.65	59461	8.40	60229	8.85
100		61152	21.10	61153	22.80	59463	14.95	60232	15.90

ACCESSIBLE FUSE TYPE

Westinghouse "WK-65"									
		With Test Facilities				Without Test Facilities			
		2 Pole		3 Pole		2 Pole		3 Pole	
Amps.	Fused For Plug *	No. Price	No. Price	No. Price	No. Price	No. Price	No. Price	No. Price	No. Price
30		65001 \$ 3.40		65010 \$ 3.90		65011 3.65		65012 4.00	
30		65001 .00	65002 4.35	65011 3.65	65012 4.00				
30	Enclosed *	65055 3.90		65063 3.90		65013 4.60	65014 4.60		
30		65003 4.85	65004 4.85	65013 4.60	65014 4.60				
60		65005 14.95	65006 15.85	65015 14.10	65016 14.95				
100		65007 23.70	65008 25.45	65017 22.80	65018 23.70				

Westinghouse "WK-54"—Sealed Main Fuses

30 Amp.	#60266-3	Pole-230 Volt AC—Less End Wall.....	\$11.00
60 "	#60287-3	" " " " " "	16.70
100 "	#60268-3	" " " " " "	26.30

PL-24

Switches

Westinghouse "WK-65"—Accessible Fuses

	Meter Test	3Phase 4W.-S.N. Non-Meter Test
30 Amp.—Less End Walls..	65100 \$11.00	65143 \$15.00
60 " " " "	65101 20.20	65140 35.95
100 " " " "	65102 29.80	65141 46.45
		65104 18.45
		65105 28.05

METER TRIMS—END WALLS—TROUGHS

For Meter Switches

	30 Amp. 60 & 100 Amp.
One Piece Meter Trims.....	\$0.35 \$0.80
Blank End Wall or Shutter Type End Wall.....	.35 .80
Shutter Type Meter Trim or Adapter Trim.....	.15 .30
New Universal Trim with Slide.....	.35 .15
Replacement Plate or Adapting Plate.....	.15 .15
Wiring Trough 2-3 & 4 "long. 40c—5" .45c—6" .50c—7" .55c—8" .60c.	
Fuse Receptacle #R57252.....	Less Fuses.....\$1.25

"TYPE A" INDUSTRIAL SWITCHES

Westinghouse "WK-66"—Quick Make & Break

Amps.	250 V. DC—230 V. AC—Fusible	600 V. DC—575 V. AC—Fusible
	2 Pole	3 Pole
30	#66100 \$10.90 #66101 \$12.70 #66020 \$16.35 #66021 \$19.95	
60	#66103 13.60 #66104 18.15 #66023 17.25 #66024 20.90	
100	#66106 20.90 #66107 27.25 #66026 27.25 #66027 31.75	
200	#66109 36.30 #66110 40.85 #66029 42.65 #66030 52.65	

Amps.	250 V. & 600 V. DC Non-Fusible	230 & 575 V. AC—Non-Fusible
	2 Pole	3 Pole
30	#66127 \$ 9.55 #66128 \$11.35 #66129 \$16.35	
60	#66047 13.60 #66048 16.35 #66049 21.80	
100	#66056 20.90 #66057 24.50 #66058 31.75	
200	#66059 36.30 #66060 40.85 #66061 46.30	

"TYPE C" INDUSTRIAL SWITCHES

Westinghouse "WK-97"—Quick Make & Break

Amps.	250 V. DC—230 V. AC—Fusible	575 Volt AC—Fusible
	2 Pole	3 Pole
30	#597100 \$ 5.45 #597101 \$ 6.80 #597151 \$10.90 #597152 \$18.15	
60	#597103 8.15 #597104 10.00 #597154 13.60 #597155 19.95	
100	#597106 12.70 #597107 15.45 #597157 21.80 #597158 36.30	
200	#597109 19.95 #597110 26.30 #597160 38.10 #597161 51.75	

Amps.	250 V. DC & 230 V. AC—Non-Fus.	575 Volts AC—Non-Fusible
	2 Pole	3 Pole
30	#597010 \$ 5.00 #597011 \$ 6.35 #597054 \$10.90 #597055 \$18.15	
60	#597013 8.15 #597014 10.00 #597054 10.90 #597055 18.15	
100	#597016 10.90 #597017 12.25 #597057 17.25 #597058 27.25	
200	#597019 19.05 #597020 22.70 #597060 29.05 #597061 46.65	

ENTRANCE SWITCHES

Noark Closed Ends

Number	Amps.	Volts	Fused For	2 Pole	3 Pole
8283-8383-8393	30	125	Plug Fuses.....	\$ 1.65	\$ 2.50
8683-8693	30	125	N.E.C. Quick Break.	1.80	3.20
8226-1-8136-1	60	250	" " " "	6.65	7.25
8221-1-8131-1	100	250	" " " "	10.25	11.90

METER SERVICE SWITCHES

Noark Sealed Service SECO Without End Walls

Number	Amps.	Volts	Fused For	2 Pole	3 Pole
9993	30	125	Plug Fuses.....	\$ 2.40	.....
9543-9523	30	125	" " " "	3.50	\$ 3.75
9563-9533	30	250	Enclosed Fuses.....	4.10	4.30
9573	30	125	" " " "	3.80	.....
66576	60	230	" " " "	11.90	.....
66566-536	60	250	" " " "	12.80	13.65
66561-71-31	100	250	" " " "	21.00	22.85

Noark Meter Service & Entrance ACCO Without End Walls

Amps.	Fused For	Meter Service Test Type	Entrance Non Test
		2 Pole	3 Pole
30A	Plug....	#9343 \$ 3.55	#8343 \$ 3.30
30A	" " " "	#9353 4.00	#8353 3.65
30A	Enc....	#9363 4.85 #9333 4.85	#8363 4.60 #8333 4.60
30A	" " " "	#9373 3.90	#8373 3.90
60A	" " " "	#6366 14.95 #6336 15.80	#7636 14.10 #7636 14.95
100A	" " " "	#6361 23.70 #6331 25.45	#7631 22.85 #7631 23.70

Noark Universal Meter Service Switches

	No. 971123	—Without End Walls.....
	#9723	.....\$3.75
	#9723	.....5.00
	#972123	.....4.65
	#973333	.....4.05
	#9733 & 9793	.....5.65
	#97333-979333	.....5.25

Noark Doall Without End Plate

Amps.	Fused For	2 Pole	3 Pole
30A	Plug.....	#913123-911123 \$ 2.95	#912333-914333 \$ 3.75
30A	" " " "	#921223 3.30	#922333-924333 4.05
60A	" " " "	#921226 8.40	#925336 8.90
100A	" " " "	#921221 14.95	#925331 15.85

"TYPE C" "NUBLADE"—Quick Break

230 Volts Fusible

Amps.	2 Pole	3 Pole	4 Pole
30	#8223 \$ 2.70	#8233 \$ 4.30	#8242 \$ 8.65
60	#8226 8.15	#8236 10.00	#8246 12.70
100	#8221 12.70	#8231 15.40	#8241 26.30
200	#8222 19.95	#8232 26.30	#8242 43.55
400	#8224 49.00	#8234 67.15	#8244 86.65

Switches

230 Volts Solid Neutral

2 Pole		3 Pole		4 Pole		
Amp.	Number	Price	Number	Price	Number	Price
30			#8933	\$ 5.20	#8943	\$10.00
60	All Solid		#8936	10.00	#8946	14.50
100	Switching Neutral		#8931	15.40	#8941	23.15
200			#8932	26.30	#8942	45.40
400			#8934	67.15	#8944	90.75

Non-Fusible

Amps.	2 Pole	3 Pole	4 Pole
	250 V.-DC-230-AC	230 Volts AC	230 Volts AC
30	#8723 \$ 2.75	#8733 \$ 4.10	#8743 \$ 8.15
60	#8726 8.15	#8736 8.65	#8746 13.60
100	#8721 10.80	#8731 12.25	#8741 20.90
200	#8722 19.05	#8732 22.70	#8742 38.10
400	#8724 36.30	#8734 47.20	#8744 63.55

Quick Break "TYPE C" "NUBLADE" 575 V.-AC

Amps.	3 Pole	4 Pole	3 Pole	4 Pole
	575 Volts AC Fusible	575 Volts Non-Fusible	575 Volts AC Fusible	575 Volts Non-Fusible
30	#8433 \$10.90	#8443 \$18.15	#8633 \$ 8.15	#8643 \$10.90
60	#8436 13.60	#8446 19.95	#8636 10.90	#8646 18.15
100	#8431 21.80	#8441 36.30	#8631 17.25	#8641 27.25
200	#8432 38.10	#8442 51.75	#8632 29.00	#8642 42.65

ACCESSORIES FOR NOARK SWITCHES

Single Piece End Wall for 30 Amp. Switches.....	\$.30	For 60 & 100 Amp....	\$.80
Shutter for 30 " " " "	..... .15	60 " 100 " " "	..... .30
Universal End Wall No. 909103.....	..... .40		
Blanking Side No. 908103-908203.....	..... .15		
Trough—3-4 & 5 " 2.40—6 " 2.45—7 " 2.50		8"—6.55—9".....	.80
Cabinet Fuse Block No. 902413.....	.....1.25		

POLYPHASE

Meter Service and Entrance Switches

125-250 Volts	Without End Walls
Main Entrance	Meter Service
"ACCO" QUAD "ACCO" QUAD "SECO" QUAD	"ACCO" QUAD "ACCO" QUAD "SECO" QUAD
BREAK	BREAK
"DOALL"—3 WIRE Accessible Fuses	Sealed Fuses
Amps. Number Price	Number Price
30	#51233 \$ 4.65 #7033 \$10.40 #67033 \$11.05 #67533 \$10.95
60	#51236 11.60 #7036 18.45 #67036 20.20 #67536 16.73
100	#51231 19.05 #7031 27.20 #67031 30.00 #67531 26.30

SOLID NEUTRAL SWITCHES

Noark Fusible—Quick Break

Amps.	Volts	3 Pole-2 Poles	4 Pole-3 Poles	5 Pole-4 Poles
		No. Price	No. Price	No. Price
30	125-250	#1333 \$ 3.30	#1433 \$ 8.15	#1533 \$12.70
60	" "	#1336 9.10	#1436 11.35	#1536 19.95
100	" "	#1331 14.50	#1431 20.45	#1531 35.85
200	" "	#1332 22.70	#1432 31.75	#1532 60.82
400	" "	#1334 63.55	#1434 81.70	#1534 111.00

BULLDOG SWITCHES

Toggle Type—Quick Make & Break

125-250 Volts	2 Pole—One Blade	2 Pole—Two	2 Pole—Three	3 Pole—Solid Neutral	3 Pole—Solid Neutral
	#92211 & T-82211.....	#92211 & T-82211.....	#92211 & T-82211.....	#92211 & T-82211.....	#92211 & T-82211.....
125	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
125	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
125-250	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
250	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
250	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
250	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
575	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
575	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
600	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
600	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
600	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80	.....\$1.80
Motor Starting Switches #81321—81321V.....	.....\$1.15				

"TYPE C" NON-INTERLOCKING

Quick Make & Break

Single Throw	Fusible	Type "C"
30 A. Porc. Base.....	#50221S \$ 3.20 #50321S \$ 5.15	Equipped with Arc Chokers
30 A. End Plates.....	#50221P 3.20 #50321P 5.15	
30 A. Slate Base.....	#50221 5.40	#50351 \$10.90 #50451 \$18.15
60 A. " " " "	#50222 8.20 #50322 10.00	#50352 13.60 #50452 20.90
100 A. " " " "	#50223 12.70 #50323 15.40	#50353 21.80 #50453 36.30
200 A. " " " "	#50224 20.00 #50324 26.30	#50354 38.10 #50454 51.75
400 A. " " " "	#50225 49.00 #50325 67.15	.....

Solid Neutral	3 Pole 2 Blades	4 Pole 3 Blades	5 Pole 4 Blades
Blades Omitted	230 V.-AC & DC	3 Fuse Holders	4 Fuse Holders
x 30 Amp. Type C...	#52311P \$ 2.50	115-230 V.-AC	115-230 V.-AC
30	#52321P 3.20	#52421 6.40	#52521 12.75
60	#52322 9.10	#52422 11.40	#52522 20.00
100	#52323 14.60	#52423 20.50	#52523 36.00
200	#52324 22.75	#52424 31.85	#52524 51.00
400	#52325 63.75	#52425 82.00	#52525 122.00

xThis Switch for 125 Volts Ed. Plug Fusible.

YOU CAN'T LEGISLATE ADEQUATE WIRING—BUT YOU CAN SELL IT!

SPEAKING to members of the A. E. I. at their 30th Annual Convention held in Milwaukee recently, A. Penn Denton, Engineer-Director of the Armored Conductor and Metallic Flexible Conduit Section, N. E. M. A., said:

☐ "In my opinion, standards of adequacy in wiring must be divided into two groups. In group one we may place all wiring regulations, or standards, which provide, as in our National Electrical Code, a minimum safe wiring installation which assures the public using electrical service safely from the standpoint of casualty and property hazard.

☐ In group two we shall place the standards which provide for a super or superior wiring installation which will include copper capacities 50% to 100% greater than the immediate connected load will require, to assure the safety to life and property.

☐ The wiring standards of group one have always been, and may always be, adopted by legislation and enforced by insurance or governmental inspection authority.

☐ The super standards of group two, while desirable at all times, cannot be enforced by legislation since all that public interest demands is a minimum degree of safety in the wiring installation. **WE MUST SELL OUR GROUP TWO STANDARDS OF ADEQUATE WIRING."**

And ADEQUATE WIRING can be sold, as today there are ten million homes in this country that need more "convenience outlets" to ADEQUATELY care for the modern electrical appliances now found therein. It's a big market for the contractor, and one for "BETTER WIRING MATERIALS"—Xduct, Electroduct, Red Seal ABC, Loomflex, Loomflex Cable, Boxes and Fittings. TALK ADEQUATE WIRING TO YOUR CUSTOMERS, AND USE IN ALL YOUR WORK THESE "BETTER WIRING MATERIALS."

"Better Wiring Materials"

Xduct and Electroduct—Rigid Conduit.

Red Seal ABC ARMORED BUSHED CABLE (Licensee Pat. No. 1687013).

Red Seal Flexible Metallic Conduit.

Loomflex, Non-Metallic Flexible Conduit (Licensee Pat. 1111806-1635829).

Loomflex Cable, Non-Metallic Sheathed (Licensee Pat. 1203788-1439323-1520680).

Boxes and Fittings.

AMERICAN CIRCULAR LOOM COMPANY, INC.

233 BROADWAY

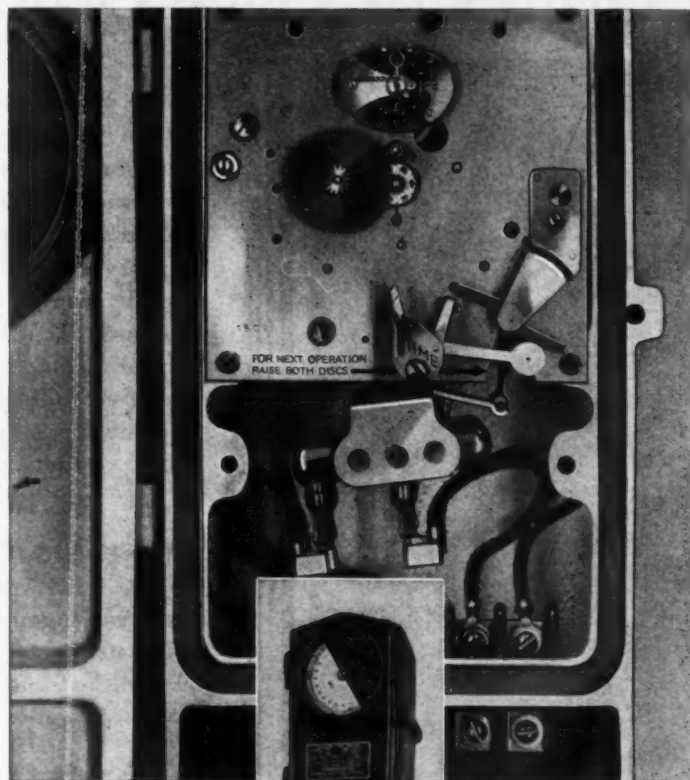


NEW YORK N. Y.

OFFICES IN PRINCIPAL CITIES

the New SANGAMO TIME-SWITCH

AGAIN PROVES THAT CONSTRUCTION MAKES PERFORMANCE



Close-up of the escapement of the Sangamo Time-switch with cover open, with dial off and with dust cap for escapement removed. Precision of design and construction is evident throughout. Accurate adjustment of clock movement is insured by micrometer adjustment provided on escapement.

Precise synchronization of switching operation with clock movement is effected by dial located below the escapement. Inset: Sangamo Time-switch with conduit-connected base.

THE Sangamo Time-switch represents the combined experience and resources of Sangamo, maker of the famous HC Watthour Meters, and Hamilton, manufacturer of the "Watch of Railroad Accuracy." It is an outgrowth of the Hamilton-Sangamo electrically-wound clock, and is, essentially, this clock arranged to trip a mercury switch. Its design and construction are reflected in its performance.

The clock mechanism is highest grade, with a jeweled Hamilton temperature-compensated escapement, protected with a dust-cap. A micrometer adjustment provides perfect regulation without removing the dust-cap.

The switch mechanism is operated by the mainspring through a differential gear. Current interruptions,

while stopping the motor, will not affect the action of the mainspring. The 24-hour dial is provided with two rows of holes, 96 in a row.

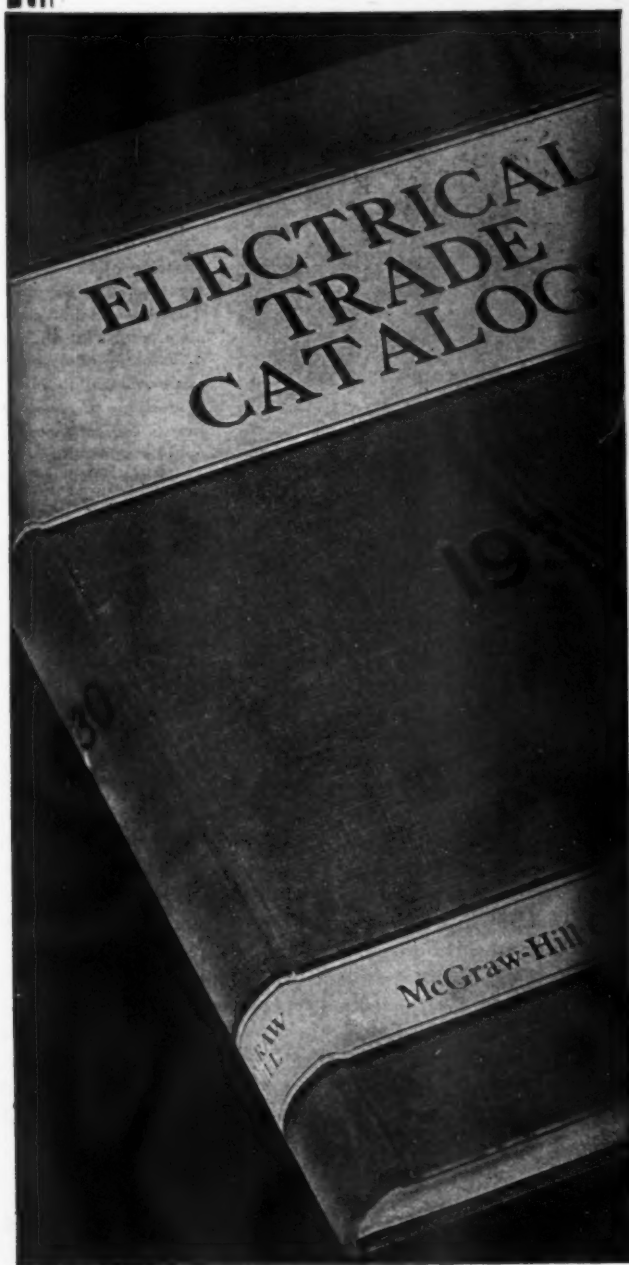
Pins inserted in these holes, allow for variations of the timing cycle, from one "open" and one "close" in 24 hours to one operation in every fifteen minutes, if desired.

The sturdiness of construction practically eliminates the need for repairs and replacements. When necessary, these can be quickly and economically effected, as all parts are readily accessible, removable as units, and interchangeable. Sangamo Time-switches are available with HC Meter chamber terminal, or conduit-connected base.

Send for literature.

SANGAMO ELECTRIC COMPANY, SPRINGFIELD, ILLINOIS

Turn to this handy catalog-file *whenever* you need information to help you Estimate, Get Orders *or* Place Orders



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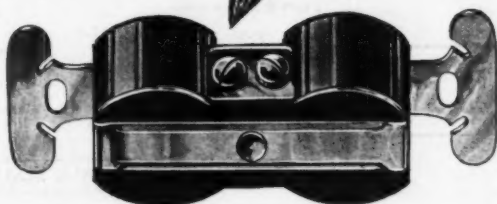
**BEAUTY
UTILITY
RELIABILITY
ECONOMY**

point to the new

**H & H
BAKELITE**

**CONVENIENCE
OUTLETS**

No. 1913-G



No. 1912-G



COMPLETELY BAKELITE—face, body, back. No moisture can penetrate, not even on concrete jobs. Broad, firm electrical connections assured by one-piece contacts; tandem or parallel-blade plugs equally positive. Compact and shallow for fast, easy wiring. Reinforced yoke permits quick, accurate alignment; withstands pressure forward or back. . . Brown or black BAKELITE, highly lustrous with a Finding Ridge which works at the touch of the plug-prongs.

With plaster ears, one binding screw each side, No. 1913-G. Two binding screws each side, No. 1912-G. Without plaster ears, same numbers without the "G".

★ 6 Points ★

- (1) BAKELITE back, defies dampness.
- (2) Reinforced yoke resists forward-or-back pressure.
- (3) One-piece contacts give broad connection-surface.
- (4) Finding Ridge twists the plug-prongs "home".
- (5) High-lustre, polished appearance pleases customers.
- (6) 2 large-head No. 8 binding screws (each side, if specified) make wiring easier.

HART & HEGEMAN DIVISION
THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

Wadsworth Switches—Continued

MAIN ENTRANCE SWITCHES—Continued
POLYPHASE

Single Phase and D. C.	Amps.	Volts	Poles	Blades	Fuses	Neutral	Accessible Fuses	Price
2230	30	250	3	3	3 NEC	None		\$10.40
1830	60	250	3	3	3 "	"		10.10
1930	100	250	3	3	3 "	"		28.70
4630	200	250	3	3	3 "	"		44.50
4830	400	250	3	3	3 "	"		101.00

METER SERVICE SWITCHES

Single Phase and D. C.	Amps.	Volts	Poles	Blades	Fuses	Neutral	Accessible Fuses	Price
1451	30	125	2	1	1 Plug	Solid		\$ 3.80
1412-1212	30	125	2	2	2 "	None		4.25
1423-1223	30	125-250	3	2	2 "	Solid		4.75
2251	30	125	2	1	1 NEC	"		4.15
2212-2223	30	125 or 250	2 & 3	2	2 "	None & Solid		5.05
1851	60	125	2	1	1 "	Solid		14.75
1812-1842	60	125 or 250	2	2	2 "	None		15.65
1843	60	125-250	3	2	2 "	Solid		16.50
1951	100	125	2	1	1 "	"		24.35
1912-1942	100	125 or 250	2	2	2 "	None		24.35
1943	100	125-250	3	2	2 "	Solid		26.10
4643	200	125-250	3	2	2 "	"		51.75
4843	400	125-250	3	2	2 "	"		109.15

POLYPHASE

Amps.	Volts	Poles	Blades	Fuses	Neutral	Price
2234	30	250	3	3	3 NEC	None \$11.25
1834	60	250	3	3	3 "	" 20.85
1934	100	250	3	3	3 "	" 30.45
4634	200	250	3	3	3 "	" 60.65
4834	400	250	3	3	3 "	" 129.35

CHANNEL BANKING TYPE

All 30 Amp.	Volts	Poles	Blades	Fuses	Neutral	Acces. Fuses	Price	Meter Service & Main Entrance
125	2	1	1	1 Plug	Solid	1451T	\$4.25	1450T \$ 4.05
125-250	3	2	2	2 "	None	1423T	5.20	1403T 4.55
125	2	2	2	2 "	None	1412T	4.70	1402T 4.35
125	2	1	1	1 NEC	Solid	2251T	4.55	2250T 4.60
250	2	2	2	2 "	None	2212T	5.55	2202T 5.25
125-250	3	2	2	2 "	Solid	2223T	5.55	2203T 5.25

METER SERVICE SWITCHES

Single Phase and D. C.	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price
162	60	250	2	2	2 NEC	None		\$ 9.15
161	60	125-250	3	2	2 "	Solid		9.55
112	100	250	2	2	2 "	None		15.65
111	100	125-250	3	2	2 "	Solid		16.50

SERVICE FUSES DEAD WITH SWITCH OPEN

Amps.	Volts	Poles	Blades	Fuses	Neutral	Price
38	30	125	2	1	1 Plug	Solid \$ 2.65
238	30	125	2	1	1 "	" 4.00
X360	30	125	2	1	1 "	" 3.45
X362	30	125	2	1	1 "	" 4.45
272	30	125	2	2	2 "	None 4.30
271-292	30	125-250	3	2	2 "	Solid 4.30
2351	30	125	2	1	1 NEC	" 4.05
2312	30	250	2	2	2 "	None 4.35
2323	30	250	2	2	2 "	Solid 4.55
2051	60	125	2	1	1 "	" 12.60
2042	60	125 or 250	2	2	2 "	None 13.50
2043	60	125-250	3	2	2 "	Solid 14.35
2101	100	125	2	1	1 "	Solid 21.75
2142	100	125 or 250	2	2	2 "	None 21.75
2143	100	125-250	3	2	2 "	Solid 23.45
4743	200	125-250	3	2	2 "	" 44.45
4943	400	125-250	3	2	2 "	None 101.00

POLYPHASE

Amps.	Volts	Poles	Blades	Fuses	Neutral	Price
2234	30	250	3	3	3 NEC	None \$ 9.85
2034	60	250	3	3	3 "	" 17.40
2134	100	250	3	3	3 "	" 26.95
4734	200	250	3	3	3 "	" 49.75
4934	400	250	3	3	3 "	" 113.00

MAIN ENTRANCE SWITCHES

Single Phase and D. C.	Amps.	Volts	Poles	Blades	Fuses	Neutral	Price
172	60	250	2	2	2 NEC	None	\$ 9.15
171	60	125-250	3	2	2 "	Solid	9.30
102	100	250	2	2	2 "	None	15.65
110	100	125-250	3	2	2 "	Solid	16.50

POLYPHASE

Amps.	Volts	Poles	Blades	Fuses	Neutral	Price
2230	30	250	3	3	3 NEC	None \$ 9.15
2030	60	250	3	3	3 "	" 15.60
2130	100	250	3	3	3 "	" 25.15

INDUSTRIAL TYPE SWITCHES

Amps.	Poles	Blades	Fuses	Acces. Fuses	Sealed Fuses	Quick Make & Break	Price
30	2	2	2	9532	\$13.65	8532	\$ 8.45
30	3	3	3	9533	15.50	8533	9.75
60	2	2	2	9562	14.65	8562	8.90
60	3	3	3	9563	18.55	8563	10.20
100	2	2	2	9512	25.00	8512	12.45
100	3	3	3	9513	28.80	8513	15.55

OUTDOOR METER SERVICE SWITCHES

30 Amp. 3 Pole Solid Neutral Outdoor or Weatherproof	Price
60 " 3 " " " " " " "	\$15.10
100 " 3 " " " " " " "	20.40
100 " 3 " " " " " " "	41.25

EXTRA END WALLS—SHUTTERS—TRIMS—ETC.

For 30 Amp. 125 Volt Switches	Wadsworth	Knock-Meter	Shut-	Shut-	ter
" 30 " 250 " 2 Pole	\$.30	\$.50	\$.30	\$.30	\$.17
" 60 " 250 " 3 "	.50	.65	.50	.25	.25
" 60 " 250 " 3 "	.65	.83	.65	.45	.25
" 100 " 250 " 3 "	.75	.90	.75	.45	.25
" 100 " 250 " 3 "	.82	1.00	.82	.45	.25
" 100 " 250 " 3 "	.90	1.10	.90	.50	.25
" 200 " 250 " 3 "	1.00	1.15	1.00	.50	.25
" 300 " 250 " 3 "	1.10	1.25	1.10	.55	.25

Murray Switches

ENTRANCE SWITCHES

30 Amp. Number	Volts	Description	With End Walls	2 Pole	3 Pole
630	125	1 Blade—1 Plug Fuse S. N.		\$1.60	
231-230	125-250	2 " 2 "		1.70	\$2.40
641-2-6	125	For 1 HP—250 V.—AC & DC Motors		1.80	
643	230	3 Blades 3 Cartridge Fuses			3.20
647	125-250	2 " 2 " S. N.			2.50
830	125-250	2 " 2 " Sealed Fuses S. N.			4.00
831	125-250	2 " 2 Plug Sealed Fuses S. N.			2.25

Accessible Main Fuses

780-782	125-250	2 Plug Fuses 2-2 Wire Branches.....	Without End Walls	
			\$5.80	\$6.80
781-783	125-250	4 " 4-2 " "	6.55	7.55
784	125	2 " 1-2 " "	6.60	...
785	125	4 " 2-2 " "	7.30	...

ACCESSIBLE MAIN FUSE TYPE AA

Amps.	Poles	Fused for	Neutral	No.	Price	With End Walls	3 Wire 4 Wire
30	2	1 Plug	Fused	755	\$3.25	764	\$3.05
30	2	1 Cart.	"	738	4.20	740	3.60
30	2	2 Plug	"	748	3.70	752	3.35
30	2	2 Cart.	"	737	4.60	757	4.25
30	3	2 Plug	Solid	756	4.30	753	3.70
30	3	2 Cart.	"	742	4.45	758	4.25
120	2	1 Plug	Fused	776	3.25	774	3.05
120	3	2 Plug	Solid	775	4.20	779	3.70
120	3	2 Cart.	"	777	4.45	778	4.25
60	2	1 Cart.	Fused	766	14.20	773	15.05
60	2	2 Cart.	"	764	15.05	762	14.20
60	3	2 Cart.	Solid	765	15.95	763	15.05
100	2	2 Cart.	Fused	709	23.85	708	22.10
100	2	2 Cart.	"	718	23.85	716	23.00
100	3	2 Cart.	Solid	719	25.60	717	23.85

x—Made with cover to permit sealing fuses independent of main cover.

POLYPHASE ENTRANCE & SERVICE

Entrance	Amps.	No.	Description	With End Walls	3 Wire 4 Wire
30	790-2	Three Legs Fused		\$11.00	\$11.60
60	760-9	Four Wire Solid Neutral		19.40	20.00
100	710-12	All 3 Pole 3 Phase		29.05	29.95
200	720-22			44.55	51.85
Service	30	791-3	Three Legs Fused	\$11.60	\$15.60
	60	767-8	Four Wire Solid Neutral	20.70	23.80
	100	711-14	All 3 Pole 3 Phase	30.50	33.25
	200	721-23		51.85	90.75

"UNISAFTI"

(Universal Standardized Switches)

Number	Pole	Fuse	Neutral	Branches & Fusing	Price
235B	2	Single	2-2-Wire	2 Fuses	\$3.25
236	2	"	4-2 " "	2 " "	4.30
237	3	Two	1-3 " "	2 " "	3.75
237	3	"	1-2 " "	2 " "	3.75
237	3	"	2-2 " "	2 " "	3.75
238	3	"	4-2 " "	4 " "	4.85
238	3	"	2-2 " "	4 " "	4.85

METER SERVICE SWITCHES

Fuses & Blades Dead	Sealed Fuses	Without End Walls	2 Pole	3 Pole	Price
30	232		\$ 2.20	233	\$ 3.35
60	254		12.85	365	13.75
60	250	For Cart. Fuses	368	12.75	
Fuses Alive	30	125	For Plug Fuses	330-1	\$ 2.65
	30	250	For Cart. Fuses	130	2.65
	60	250	" " "	360	8.45
	100	250	" " "	310	15.05

SEALABLE MAIN FUSES

3 Pole-3 Blades-For Cart. Fuses 250V.	332	\$11.10	362	\$16.80	311	\$26.50
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TYPE C-SWITCHES

Fusible	Description	Quick Break	2 Pole	3 Pole	4 Pole
Amps.	All Cart. Fuse	No.	Price	No.	Price
30	Solid Neutral 125-250	632	\$2.65	633	\$3.75
60	Solid Neutral 125-250	661	6.60	663	7.45
60	Solid Neutral 125-250	465	6.60	665	7.10
60	Solid Neutral 125-250	611	10.50	613	12.80
100	Solid Neutral 125-250	507	10.50	615	11.60
100	Solid Neutral 125-250	621	18.50	623	22.75
200	Solid Neutral 125-250	622	22.75	629	40.85
200	Solid Neutral 125-250	622	22.75	623B	23.70

END WALLS, PLATES & TROUGHS & ADAPTORS

End Wall	30	60	100
Shutter	\$.30	\$.65	\$1.00
Closure Plate	.15	.25	.25
Trough Cover & Adapting Slide	.30	.30	.30
Trough 2" 3 & 4"	.15	.15	.15
" 5"			\$.40
" 6"			.45
" 7"			.50
" 8"			.55
" 9"			.60
" 10"			.65

Switches

Tape

Diamond E Switches

SMALL ENTRANCE SWITCHES, 30 AMPS.

Volts	For Fuses	Description	2 Pole	3 Pole
125	Plug	All Fused	P-2 \$1.65	P-3 \$2.75
125	Plug	Ground Neutral	P-2S 1.65	P-3S 2.25
250	Cartridge	All Fused	C-2 2.25	C-3 4.00
250	Cartridge	Ground Neutral	C-2S 2.90	C-3S 2.90

ALL-N-ONE SWITCHES

Live Front	Double Fuse	Dead Front	Single Fuse
No. Circuits	Price	No. Circuits	Price
A-2 2	\$3.45	AD-3 3	\$ 5.40
A-3 3	3.80	AD-4 4	5.85
A-5 5	4.15	AD-5 5	6.75
A-7 7	6.60	AD-6 6	7.95
A-9 9	6.95	AD-8 8	9.30
		AD-10 10	11.25

RANGE & WATER HEATER SWITCHES

60 Amp.—125 Volts

No. 501	No. 502	No. 503	No. 504	No. 505	No. 506	No. 507
\$9.90	\$15.25	\$23.60	\$26.75	\$20.25	\$8.90	\$13.90

MOTOR STARTING SWITCHES

MS-1 30 Amp. 3 Pole 220 Volts Quick Make & Break Toggle.....	\$6.00
C-3P 30 Amp. 3 Pole 250 Volts Not Toggle.....	7.10

SAFE LINE SERVICE SWITCHES

No. 904 Single Pole 4 Circuits with Transformer.....	\$7.85
" " " " without Transformer.....	6.60

INDUSTRIAL TYPE

Quick Break—Single Throw—Fused Bottom

Amp.	No.	Price	No.	Price	No.	Price
30	3022	\$ 5.40	3032	\$ 6.75	3042	\$ 7.90
60	6022	8.10	6032	9.00	6042	11.65
100	10022	11.65	10032	13.30	10042	24.10
200	20022	18.25	20032	24.10	20042	39.75
400	40022	44.85	40032	61.50	40042	87.20
600	60022	78.90	60032	91.30	60042	131.10

Amp.	No.	Price	No.	Price	No.	Price
30	3025	\$ 9.00	3035	\$ 8.55	3045	\$ 12.45
60	6025	9.90	6035	10.80	6045	13.30
100	10025	13.30	10035	15.80	10045	26.60
200	20025	26.60	20035	30.00	20045	43.20
400	40025	68.00	40035	74.70	40045	116.20
600	60025	96.30	60035	103.00	60045	167.70

Amps.	No.	Price	Amps.	No.	Price
30 Amp.	3026	\$15.30	100 Amp.	10026	\$25.00
60 Amp.	6026	15.80	200 Amp.	20026	38.60

Not Fused—Quick Break

Amps.	Pole	Volts	Number	Price	Number	Price
30	2	250 DC	3022N	\$ 5.00	3022DN	\$ 10.90
30	3	250 DC	3032N	6.30	3032DN	12.45
30	2	500 AC	3025N	8.65	3025DN	13.15
30	3	500 AC	3035N	8.10	3035DN	16.60
60	2	250-500	6025N	8.10	6025DN	13.15
60	3	250-500	6035N	8.55	6035DN	16.60
100	2	250-500	10025N	11.50	10025DN	24.90
100	3	250-500	10035N	11.25	10035DN	30.70
200	2	250-500	20025N	17.00	20025DN	34.85
200	3	250-500	20035N	20.75	20035DN	60.60
400	2	250-500	40025N	49.80	40025DN	90.60
400	3	250-500	40035N	58.00	40035DN	132.80
600	2	250-500	60025N	83.00	60025DN	141.00
600	3	250-500	60035N	99.00	60035DN	163.50

S-SUNDRIES

WOOD SCREWS

Flat Head

Size	Price Per Doz.	Size	Price Per Doz.	Size	Price Per Doz.
1/4"x8 & Smaller.....	\$.05	1 1/4"x12.....	\$.07	2 1/4"x10.....	\$.08
1/4"x8.....	.05	1 1/4"x8.....	.07	2 1/4"x12.....	.09
1/4"x8.....	.05	1 1/4"x8.....	.07	2 1/4"x8.....	.07
1/4"x8.....	.05	1 1/4"x10.....	.07	2 1/4"x8.....	.08
1/4"x8.....	.05	1 1/4"x12.....	.07	2 1/4"x10.....	.09
1"x8.....	.05	2"x8.....	.08	3"x8.....	.09
1"x8.....	.05	2"x10.....	.08	3"x10.....	.10
1"x10.....	.05	2"x12.....	.09	3"x12.....	.13
1 1/4"x8.....	.06	2 1/4"x8.....	.07	3 1/4"x14.....	.15
1 1/4"x10.....	.07	2 1/4"x8.....	.07		

NOTE—For Round Head Wood Screws Add 30% to above prices.

MACHINE SCREWS

Round or Flat Head

Size	Price per Dozen Iron	Price per Dozen Brass
1/4" x 1/4".....	\$.05	\$.08
1/4" x 1/2".....	.05	.10
1/4" x 3/4".....	.05	.12
1/4" x 1".....	.05	.12
1/4" x 1 1/4".....	.05	.12
1/4" x 1 1/2".....	.05	.12
1/4" x 1 3/4".....	.05	.13
1/4" x 2".....	.05	.13
1/4" x 2 1/4".....	.05	.15
10/24 x 1/4".....	.06	.20

MACHINE SCREWS—Concluded
Round or Flat Head

	Price per Dozen Iron	Price per Dozen Brass
10/24 x 1.....	\$.06	\$.22
10/24 x 1 1/4.....	.06	.25
10/24 x 1 1/2.....	.07	.29
1/4" x 20.....	.08	.36
1/4" x 20-1.....	.09	.40
1/4" x 20-1 1/4.....	.10	.45
1/4" x 20-1 1/2.....	.12	.50

NOTE—For Machine Screws with Fillister Head add 25% to above prices.

LAG SCREWS

Square Heads or Coac. Screws

Length	2"	2 1/4"	3"	3 1/4"	4"	4 1/4"	5"	6"
1/4" Black.....	\$.03	\$.04	\$.04	\$.05	\$.05	\$.05	\$.06	\$.07
1/4" Black.....	.03	.04	.04	.05	.05	.06	.07	.07
1/4" Black.....	.04	.05	.05	.06	.07	.07	.07	.08
1/4" Black.....	.05	.06	.06	.07	.08	.09	.09	.10
1/4" Galv.....	.04	.05	.05	.06	.06	.06	.07	.08
1/4" Galv.....	.04	.05	.05	.06	.06	.07	.08	.09
1/4" Galv.....	.05	.06	.06	.07	.07	.08	.09	.10
1/4" Galv.....	.06	.07	.07	.08	.08	.09	.10	.11

STRAPS—CLIPS OR CLAMPS

For Pipe

	Price Each	1"	1 1/4"
Without Screws			
Galvanized Straps, 2 Hole.....	\$.01	\$.01	\$.02
(Per Pound \$.20) No. Straps per Lb.....	45	40	25
Light Steel Straps, 1 Hole.....	.04	.05	.06
Mall. Iron Clamps, 1 Hole.....	.06	.07	.08
P & S Conduit Clamps with Bolts			
Series 1400.....	.10	.14	.20

	Price Each	1 1/4"	2"	2 1/4"	3"
Without Screws					
Galvanized Straps, 2 Hole.....	\$.02	\$.04	\$.05	\$.06	\$.06
(Per Pound \$.20) No. Straps per Lb.....	12	7	5	4	4
Light Steel Straps, 1 Hole.....	.25	.45	.05	.85	.85
Mall. Iron Clamps, 1 Hole.....	.25	.45	.05	.85	.85
P & S Conduit Clamps with Bolts—Series 1400	.25				

SOLDER

	40-60 Bar or Wire	50-80 Bar or Wire	Resin or Acid Core	Ribbon 30-70	Allen Alumi-Flux
Per Pound.....	\$.65	\$.70	\$.85	\$.75	\$2.00
Per Ounce.....	.03	.03	.08	.07	.15

SOLDER PASTE

Make	2 oz. Cans	2 oz. Tubes	4 oz. Cans	Half Pound Cans	One Pound Cans
Allen.....	\$.25	\$.40	\$.50	\$.90	\$1.50
Barnley.....	.30	.40	.40	.70	.70
Cracrescent.....	.25	.40	.40	.65	1.00
G. E.....	.25	.40	.40	.90	1.50
Highland.....	.45	.40	.40	.90	1.50
Nokorode.....	.25	.40	.40	.90	1.50
Star.....	.25	.40	.40	.65	1.00

SOLDERING SALTS

	1/4 Lb.	1 Lb.
Barnley.....In cans each.....	\$.40	\$.75
Yeager....." " " ".....	.75	1.00
McGill Crescent.....In Bottles each.....	.85	1.00
Nokorode.....In cans each.....	.75	1.00
Allen.....In Bottles each.....	.75	1.00

SOLDER STICKS

	Price
Barnley.....	\$.25
Samson.....	.20
Allen.....	.40
Cracrescent.....	.25
GE.....	.25
Star.....	.25

FIXTURE STUDS

	1/4"	1/2"
Four Prong Fixture Studs Less Bolts.....	\$.10	\$.15
Rolts Extra.....	.01	.01
No Bolt Fixture Studs.....	.10	.15

STAPLES

	Price
Staples Insulated Nails Per Dozen.....	\$.05
Leather Nail Heads Per Dozen.....	.05
Milonite Insulated Nails Per Dozen.....	.05

TAPE

FRICTION TAPE

	Per Pound	Per Half Pound	Per 2 Ounce	Per 1 Ounce	Per Foot
Amazon Friction.....	\$.65	\$.35	\$.10	\$.05	\$.01
Adhere.....	.55	.30	.10	.05	.01
Rulldog.....	.70	.40	.10	.05	.01
Clifton.....	.65	.35	.10	.05	.01
Commodity.....	.60	.30	.10	.05	.01

FRICTION TAPE—Concluded

	Per Pound	Per Half Pound	Per 2 Ounce	Per 1 Ounce	Per Foot
Dutch Brand	\$.85	\$.35	\$.10	\$.05	\$.01
Everstick	.60	.30	.10	.05	.01
Eaco	.95	.50	.15	.10	.02
G. E.	.55	.30	.10	.05	.01
Grimshaw	2.00	1.00	.25	.15	.03
Holdfast	1.00	.50	.15	.10	.02
Holdrite U. S.	.55	.30	.10	.05	.01
I X L	.75	.40	.10	.05	.01
Illinois	.55	.30	.10	.05	.01
Johns Manville Armature	1.75	.90	.20	.10	.02
" " Jomanco	1.00	.55	.15	.10	.02
" " White	1.35	.70	.20	.10	.02
" " No. 3 New No. 5	.55	.30	.10	.05	.01
" " No. 6	.50	.25	.10	.05	.01
Jaxon	.50	.30	.10	.05	.01
Leader	.70	.35	.10	.05	.01
Manson	1.25	.65	.20	.10	.02
Magnet	.75	.40	.10	.05	.01
O. K.	.60	.30	.10	.05	.01
P & B	1.00	.50	.15	.10	.02
Paragon	1.65	.85	.20	.10	.02
Service	.90	.45	.15	.10	.02
Stampat	.85	.30	.10	.05	.01
Stick	.50	.25	.10	.05	.01
Security	.45	.25	.10	.05	.01
Victor	.55	.30	.10	.05	.01
Vim Grav	1.10	.60	.15	.10	.02

RUBBER TAPE

	Rubber	\$.05	\$.50	\$.15	\$.10	\$.04
Amazon						
Alexall						
Alpha						
Brooklyn						
Clifton						
Dutch Brand						
Eleo						
G. E.						
Graybar Victor						
Holdfast						
Imperial						
Illinois						
Obonite						
Para						
Pittsburgh						
Relio U. S.						
Security						
U. S. Rubber						
Twin Tape Rubber & Friction						
USCO Westinghouse						

COUCH TELEPHONES

VESTIBULE TYPE

No. 74 Armored Cord Receiver Type	\$25.00
No. 74A Swing Arm Receiver Type	\$27.30
No. 74C Cordless Loud Speaker Type	\$30.75
Above prices are for telephones complete but do not include for any call buttons.	
Add for buttons—Janitor Calling Buttons if fitted	\$.95
Add for Each Suite Calling Button	.95

SUITE TELEPHONES

Series 2800 to 2840 or 1900 to 40	Page 22 Bulletin No. 80 S. H. Couch Co.
Number of Buttons	0 1 2 3 4
Price Ea. Surface or Flush	\$11.40 \$11.40 \$12.45 \$13.60 \$14.60

TELEPHONE CABLES

Number of Conductors	Braided Type "B"	Lead Covered Type "L"
	Number Price per Foot	Number Price per Foot
8	B-8 \$1.14	L-8 .21
12	B-12 .1534	L-12 .27
16	B-16 .18	L-16 .27
21	B-21 .22	L-21 .39
25	B-25 .24	L-25 .32
31	B-31 .27	L-31 .39
37	B-37 .30	L-37 .44

TIME SWITCHES

GENERAL ELECTRIC TIME SWITCHES

Type	Cat. No.	Price	Type	Cat. No.	Price
T-8-B1 30x458 to 471	22.00	23.00	60 Cycle 10x637 & 38	\$44.00	\$45.00
T-8-B2 30x460 to 473	22.00	23.00	50 10x639 & 40	41.00	42.00
T-8-B3 30x462 to 475	22.00	23.00	Extra for Cutouts	4.00	4.00

HARTFORD TIME SWITCHES

Type	B Single or Double Pole	10 Amp.	20 Amp.	35 Amp.	50 Amp.
B Triple Pole		\$36.00	\$39.00	\$42.00	\$50.00
C & D Single or Double Pole		38.00	41.00	45.00	52.00
C & D Triple Pole		39.00	42.00	47.00	52.00
G Apt. Light Control D. P.		41.00	45.00	49.00	52.00
		38.00	41.00	45.00	52.00

HORELECTRIC TIME SWITCHES

60 Amp. D. P. Eight Day Time Switch and Box	\$24.00
Automatic Electric Time Switch with Automatic Electric Time Motor and Box	32.00
Eight Day Time Motor	12.00
Automatic Electric Time Motor	20.00

RELIANCE & RACINE SWITCHES

Racine Type 1R-3R	10 Amp.	20 Amp.	30 Amp.	50 Amp.
	\$19.50	\$23.00		
Reliance Type 10-20-30-50	28.00	30.00	\$32.00	\$36.00
Reliance Type 18 Triple Pole		32.00		
Apartment House Types A-B-C-D-E-F-G	30.00	30.00		

SANGAMO TIME SWITCHES

All 20 Amp. 115 V.—15 Amp. 230 V.	A. C.	D. C.	D. C.
T or TC 1 Single Pole Single Throw	115-220V \$40.00	115 Volt \$45.00	230 Volt \$47.50
T TC 1 " " Double " "	42.50	47.50	50.00
T TC 2 Double " Single " "	45.00	50.00	52.50
T TC 2 " " Double " "	47.50	52.50	55.00

SAUTER TIME SWITCHES

No.	Amps.	Poles	Description	Price
101	2	1	Clock operated, key wound 40 day clocks	53.00
111	10	1	" " " " 40 " "	56.00
121	15	2	" " " " 40 " "	60.00
201	2	1	Self winding	74.00
211	10	1	" " " " " "	80.00
221	10	2	" " " " " "	85.00
321	25	2	Motor operated self winding clocks	105.00
341	40	2	" " " " " "	110.00
401	100	2	Motor operated Oil Break self winding clocks	190.00
431	200	2	" " " " " "	250.00
461	300	2	" " " " " "	290.00

TORK TIME SWITCHES OR CLOCKS

Single Pole 15 Amp. 125 Volt	Indoor	Outdoor	Switchboard
Double " 30 " 250 "	#115H \$20.00	#215H \$27.50	#015H \$17.50
Single " Double Throw	#130H 25.00	#230H 32.50	#030H 22.50
	#166H 25.00	#266H 32.50	#066H 22.50

Contactor and Clock Combination

#76062-60 Amp. 2 Pole AC	\$50.00	#75062-60 Amp. 2 Pole DC	\$70.00
#76102-100 " AC	75.00	#75102-100 " DC	125.00

ZENITH TIME SWITCHES

Model #110-8 Day	10 Amp.	20 Amp.	30 Amp.	60 Amp.	100 Amp.	200 Amp.
Electric Wound—AC	\$20.00	\$23.00	\$25.00			
—DC		40.00				
Astronomic Dial—AC	79.00					
—DC	84.00					
Remote Con. Swch.—AC		16.50	\$22.50	\$42.50	\$75.00	
—DC		23.50	38.00	55.00	93.00	

TRANSFORMERS

BELL & TOY TRANSFORMERS

				50 to 133		25 to 40	
Name	Style	Watt	Secondary Volts	No.	Price	No.	Price
	Steel Clad Bell	25	Single	86	\$ 1.25	86	\$ 1.45
		25	Three	86T	1.55	86T	1.75
	Porcelain Bell	25	Single	87	1.55	87	1.75
	Out. Box Bell	25		86ER	1.55	86ER	1.75
ED- WARDS	Heavy Duty	50	8-10-24	88	4.25	88	4.65
	"	75	"	89	6.40	89	7.00
	"	100	"	90	7.40	90	8.15
	Toy	50	3 to 18	570	3.50	570	4.20
	"	75	3 to 24	571	5.85	571	7.00
	"	100	2 to 30	572	8.75	572	10.50
.....							
G. E.	Bell Residence		12 Volt	2332	1.00	193340	1.45
	Box Type		12 "	2488	1.40	2490	1.75
	Heavy Duty	50	8-10-24	2333	4.85	2339	7.00
	"	100	10-20-30	2334	6.95	2340	11.30

Wizard	25 10 Volt	230-101	1.00	230-102	1.15
Nucode	25 10 Volt	230-111	1.40	230-112	1.65
Tri-Volt	25 6 to 18V.	230-121	1.40	230-122	1.65
Porcelain		230-131	1.40		
Little Jeff Toy	50 5 1/2-13	535-101	8.65	535-102	4.30
Midger Toy	75 5 1/2-22	535-121	4.45	535-122	5.80
Model 2 Toy	100 5 1/2-23	535-131	6.75	535-132	8.40
Model 3 Toy	150 1-30	535-141	8.65		
Heavy Duty A	50 6 to 20	231-101	5.10	231-102	7.25
" " B	75 6 to 20	231-111	7.70	231-112	10.30
" " C	100 6 to 24	231-171	8.90	231-172	10.00
" " E	250 8 to 24	231-141	21.00	231-142	26.40

Blue Bell	10 8 Volt	6106	1.00		
Tri-Volt	20 6 to 16	6103	1.40		
Box Type	10 8 Volt	7166	1.40		
KIL- Porcelain Case	10 8 Volt	4166	1.40		
LARK "Black Bell"—H. D.	50 6-14-20 V.	816-50	5.00		
" " " "	75 6-14-20 V.	816-75	7.50		
" " " "	100 6-12-18-24	916-100	8.90		
"Box Bell" in Box	10 8 Volt	9166	2.30		

Mold. Single	25 10 Volts	221	1.40		
Mold. 3 Circuit	25 6 to 18V.	222	1.55		
Steel Sgle. Cir.	25 10 Volts	225	1.25	235	1.35
Steel 3 Circuit	25 6 to 18V.	226	1.40		
Cov. Ty 3 Sgle. Cir.	25 10 Volts	227	1.40	237	1.55
Cov. Type 3 Cir.	25 6 to 18V.	228	1.55		

Porcelain Clad	25 Single	300D1	\$1.65	201G1	\$2.10
Steel	15 Single	203D1	2.10	204G1	2.55
" "	15 Single	205S	1.25	206SG	1.40
" "	15 6-9-15	207S	1.45	208SG	1.75
Heavy Duty Porc.	50 6-12-18	209HD1	6.45	210HE1	7.20
" "	100 8-16-24	212EHD	7.75	213HE	10.30
Steel Clad "A"	50 6-12-18	300A	6.20	301A	6.75
" " "B"	100 6-12-18-24	302B	9.25	303B	10.75
" " "C"	200 6-12-18-24	304C	17.50	305C	20.65
" " "E"	300 6-12-18-24	306E	31.45	307E	35.75
" " "F"	500 6-12-18-24	308F	28.90	309F	36.00

STAN- LEY	TB H'vy Duty	50 8-16-24	501 4.25	502 4.75
PATTER- SON	TB H'vy Duty	75 8-16-24	751 6.40	752 7.00
	TB H'vy Duty	100 8-16-24	1001 7.40	1002 8.15
	TB H'vy Duty	150 8-16-24	1501 9.10	1502 10.00

NOTE: For 220 Volt Transformers add 20% to above prices

WIRES

Special Price on No. 14 S.B. Wire

In less than Coil Lots		Per Foot		
In Coil Lots		\$.01½		
		.01		
Other Sizes		No. 18	No. 16	No. 14
Fixture Wire Light		\$.01	\$.01½	
" Heavy .....		.01½	.01½	
Solid Single Braid .....		.01	.01½	See Above
" Double .....		.01½	.01½	\$.01½
Stranded Sgle. Braid .....		.01½	.01½	.01½
Dble. ....				.01½
Duplex Single Braid .....				.03
Double .....				.04
Other Sizes		No. 12	No. 10	No. 8
Fixture Wire Light				
" Heavy				
Solid Single Braid	\$.01½	\$.01½	.02½	\$.04
" Double .....	.03	.02½	.03½	.04½
Stranded Sgle. Braid .....	.02	.02½	.03½	.04½
Dble. ....	.02½	.02½	.04	.05
Duplex Single Braid .....	.04	.04	.06½	.09½
Double .....	.05	.05½	.08	.10

LARGER SIZES DOUBLE BRAID STRANDED

Size	Price Per Foot	Size	Price Per Foot
No. 8 D. B.	\$.04	No. 0 No. 00	\$0.15 18
No. 6 D. B. ....	.05	No. 000	22
No. 4 D. B. ....	.05 1/2	No. 0000	27
No. 3 D. B. ....	.07 1/2	250,000.....	33
No. 2 D. B. ....	.09		
No. 1 D. B. ....	.13 1/2		

CIRCULAR MILL CABLE

Size	Per Foot	Price	Size	Per Foot	Price
300,000 C. M.	\$0.35	700,000 C. M.	.....	\$0.83
350,000 C. M.44	750,000 C. M.	.....	.88
400,000 C. M.48	800,000 C. M.	.....	.93
450,000 C. M.54	900,000 C. M.	.....	1.05
500,000 C. M.58	1,000,000 C. M.	.....	1.15
600,000 C. M.72			

Additions to Code Wire for 25% (Intermediate Grade) and 30% Wire.

Sizes	For Intermediate or 25% Wire	For 30% Wire
From No. 14 to No. 1.....	5%	10%
From No. 1/0 to 4/0.....	3%	6%
From 250,000 to 400,000 CM.....	2%	5%
From 500,000 to 1,000,000 CM.....	1½%	3%

WEATHERPROOF WIRE

Triple Braid

	No. 18	No. 16	No. 14	No. 12	No. 10	No. 8	No. 6
Per Pound Solid.....	\$.60	\$.55	\$.52	\$.40	\$.43	\$.40	\$.39
" Stranded.....					.50	.45	.43
Per Foot Solid.....	.01	.01 1/4	.02	.02 1/4	.03	.04	
" Stranded.....	.01 1/4	.01 1/2	.02 1/4	.03	.03 1/2	.04 1/2	
Number Feet Per Pound...	70	85	40	30	20	13	

EXTRAS— For slow burning W. P. Wire—Per Pound Extra.....	\$.01
For Twisted Pair W. P. Wire—Per Pound Extra.....	.02
For Double Braid W. P. Wire—Per Pound Extra.....	.01
For Medium Hard Drawn—Per Pound Extra.....	.00 1/2

For Armored Cables See Page PL-9.

ANNUNCIATOR—TELEPHONE WIRE, ETC.

		Description	No. 18	No. 16
Fixture Wire	Solid	Light 1/4 Per Foot.....	\$.01	\$.01 1/2
	"	Heavy 1/2 " ".....	.01 1/2	.01 1/2
	Stranded	Light 1/4 " ".....	.01 1/2	.01 1/2
	"	Heavy 1/2 " ".....	.01 1/2	.01 1/2

Description		Annunciator Wire			
		No. 18	No. 16	No. 14	No. 12
Single	Per Pound.....	\$0.60	\$0.58	\$0.56	.....
	Per Foot.....	.0045	.0044	.01	.....
Twisted or Duplex	Per Pound.....	.65	.64	.62	.....
	Per Foot.....	.01	.0145	.02	.....

Office & Damp Proof Wire

Single	Per Pound.....	.70	.68	.64	.....
	Per Foot.....	.01	.01½	.03	.....
Twisted or Duplex	Per Pound.....	.76	.71	.68	.....
"	Per Foot.....	.02	.03	.04	.....

.....
 "Deltabeston" or similar

Single Stranded Black/White Per Foot	.02 1/2	.03	.03 1/2	\$.04
Single Stranded Colored Per Foot	.03	.03 1/2	.04 1/2	.05 1/2
Single Glazed Cotton Per Foot	.03	.03 1/2	.04 1/2	.05 1/2
Single Artificial Silk Per Foot	.04	.04	.05	.....
Duplex Glazed Cotton Per Foot	.06	.07	.08	.....
Duplex Artificial Silk Per Foot	.07	.08	.09	.....
Twisted Pair Glazed Cotton Per Foot	.07	.08	.09	.....
Twisted Pair Artificial Silk Per Foot	.07	.08	.09	.....

Asbestos Range Wire

Description	No. 18	No. 16	No. 14	No. 12	No. 10	No. 8
Asbestos Range Wire or Switch Board						
Wire Single Solid—Per Foot	\$.07	.08	.09	.10	.12	.14

TELEPHONE WIRES

Covered		Description		Price
Inside & Outside	Size Ins.			Per Ft.
#19	3/32"	Inside 2 Cond Twisted Pr.		\$.03
19	3/32"	" " " "		.04
22	5/64"	" " " "	Flameproof.	.04
18	7/64"	Outside 2 "	Sat. Brd. Bridle W.	.03
16	4/32"	" " " "	" " " "	.03
14	3/32"	" " " "	" " " "	.03
14	5/32"	" " " "	Copperweld-Drop W.	.05

For price of single conductor use one-half of 2 Cond. price.

GALVANIZED TELEPHONE WIRE

	Size BWG	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14
EBB Extra Best	Per Pound...	\$.12	\$.12	\$.12	\$.12	\$.13	\$.14
B. B. Best Best	" " ...	.11	.11	.11	.11	.12	.13
Steel	" " ...	.10	.10	.10	.10	.11	.12
Weight Per 1000 Feet.....		153	112	74	49	32	19
Weight Per Mile.....		811	590	390	258	170	90

WIRE, MAGNET

Price Per Pound

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Plain Enamel- ed	Enamel- ed Single Cotton	Enamel- ed Double Cotton
8	\$.63	\$.66	.....	.....	\$.63	\$.67	\$.70
10	.65	.68	.....	.....	.64	.69	.72
12	.67	.72	.....	.....	.66	.72	.74
14	.70	.74	.....	.....	.68	.74	.80
16	.72	.78	\$ 1.02	\$ 1.26	.68	.76	.82
18	.78	.83	1.11	1.40	.72	.81	.90
20	.83	.96	1.24	1.60	.74	.90	1.00
22	.93	1.04	1.33	1.65	.76	.96	1.10
24	1.00	1.22	1.46	1.83	.80	1.05	1.30
26	1.10	1.37	1.60	2.04	.83	1.24	1.50
28	1.28	1.70	2.00	2.44	.90	1.40	1.80
30	1.36	1.86	2.15	3.30	.96	1.76	2.10
32	1.78	2.43	2.80	4.64	1.02	1.90	2.60
34	2.22	3.15	3.68	6.53	1.13	2.52	3.42
36	2.88	4.08	5.22	8.53	1.30	3.24	4.50
38	5.06	7.60	8.36	13.90	1.54	5.55	.....
40	.....	.....	.....	.....	1.86	.....	.....

NOTE: For odd sizes use half the increase of next larger size.

For $\frac{1}{2}$ lb. lots use one third of above prices.
For one ounce lots use one tenth of above prices.

For one ounce lots use one tenth of above prices.

Price Per 100 Feet

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Enamelled Cotton	Single Cotton	Double Cotton
8	\$3.60	\$4.00	.....	.....	\$3.35	\$4.00	\$4.20
10	2.40	2.40	.....	.....	2.00	2.40	2.20
12	1.50	-1.60	.....	.....	1.36	1.60	1.60
14	1.30	1.25	.....	.....	1.28	1.55	1.57
16	.75	.80	\$0.90	\$1.00	.72	.75	.95
18	.50	.55	.56	.65	.40	.52	.65
20	.36	.40	.50	.52	.32	.40	.52
22	.26	.32	.35	.36	.24	.32	.36
24	.30	.25	.25	.30	.16	.24	.30
26	.12	.14	.16	.20	.11	.14	.16
28	.09	.10	.12	.16	.09	.10	.12
30	.09	.10	.10	.12	.09	.10	.12
32	.09	.10	.10	.11	.09	.10	.11
34	.09	.10	.10	.11	.09	.10	.11
36	.09	.10	.10	.11	.09	.10	.11
38	.09	.10	.10	.11	.09	.10	.11
40	.....	.....	.....	.....	.09	.10	.11

Note: Prices per 100 feet are higher than per pound rate to cover cost of measuring and should be used only for small lot sales.

LEAD & RUBBER COVERED WIRE AND CABLE

Size			Single Conductor		Duplex		Three (3) Conductor	
No.	14	Price Per Foot	Solid	Stranded	Solid	Stranded	Solid	Stranded
No. 12	14	..	\$.04	\$.05	\$.07	\$.08	\$.14	\$.16
No. 10	14	..	..	..	..	..	..	..
No. 10	14	..	..	..	..	..	..	..
No. 8	14	..	..	..	..	..	..	..
No. 6	14	..	..	..	..	..	..	..
No. 4	14	..	..	..	..	..	..	..
No. 3	14	..	..	..	..	..	..	..
No. 2	14	..	..	..	..	..	..	..
No. 1	14	..	..	..	..	..	..	..
No. 1/0	14	..	..	..	..	..	..	..
No. 2/0	14	..	..	..	..	..	..	..
No. 3/0	14	..	..	..	..	..	..	..
No. 4/0	14	..	..	..	..	..	..	..
250,000 C. M.	Cable	..	..	..	..	..	..	..
300,000 C. M.	"	..	..	..	..	..	..	..
350,000 C. M.	"	..	..	..	..	..	..	..
400,000 C. M.	"	..	..	..	..	..	..	..
500,000 C. M.	"	..	..	..	..	..	..	..
600,000 C. M.	"	..	..	..	..	..	..	..
700,000 C. M.	Cable	..	..	..	..	..	..	..
750,000 C. M.	"	..	..	..	..	..	..	..
800,000 C. M.	"	..	..	..	..	..	..	..
900,000 C. M.	"	..	..	..	..	..	..	..
1,000,000 C. M.	"	..	..	..	..	..	..	..

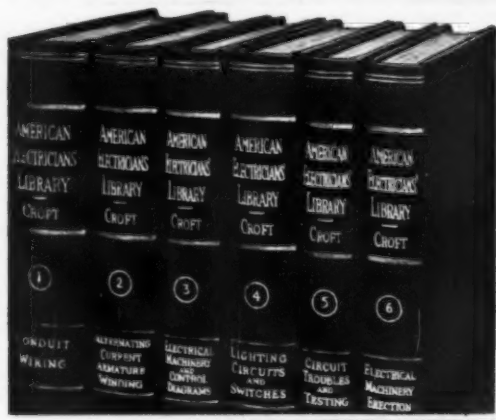
NOTE: Above prices are based on following quantities:

No. 14 to No. 8 Less than 100 ft. No. 6 and larger less than 50 ft.

PARKWAY CABLES

Size	Steel Taped		Non-Metallic	
	2 Cond.	3 Cond.	2 Cond.	3 Cond.
No. 14 per ft.....	.35	.46	.18	.23
No. 12 " " .....	.38	.50	.20	.26
No. 10 " " .....	.43	.55	.22	.30
No. 8 " " .....	.48	.74	.26	.38
No. 6 " " .....	.70	.95	.37	.57
No. 4 " " .....	.85	1.30	.50	.72
No. 2 " "	1.06	1.65	.66	.98
No. 1 " "	1.38	2.35	.80	1.38
No. 0 " "	N/A	2.10	.83	1.47

NOTE: Prices on Parkway Cables are based on Trade costs in quantities of less than 100 Feet. Larger quantities take lower prices. Consult your jobber.



To electrical workers who want to succeed!

THOUSANDS of men in every part of the country have used the six big books of the American Electricians' Library to make their work easier and to push themselves ahead. If you, too, are determined to go further in electrical work, no matter what your position is now, you are invited to examine the American Electricians' Library for 10 days without any obligation to purchase it. Furthermore, if after you have examined these books you decide that they can help you as they have helped countless others, you can have Braymer and Roe's *Rewinding Small Motors* absolutely free.

Free Examination—Small Monthly Payments

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What the six big volumes of this Library offer you!

Terrell Croft prepared this subscription library for practical electricians. The six volumes bring to you exact step-by-step directions for the installation of every type of conduit wiring job—they tell you how to handle every kind of lighting circuit and switch problem—they give you short cuts to saving time on maintenance routine—they give you useful tips on electrical machinery erection—they offer you practical, clear explanations of all kinds of A.C. armature winding jobs—they bring you a thousand armature winding, electrical machinery, and control diagrams—they show you the surest, quickest methods of locating and remedying circuit troubles. They cover the countless problems you are confronted with daily.

More than 1,000 wiring diagrams—

The thousand wiring diagrams in these six books are alone worth the price of the entire library to any practical electrician. Many of these diagrams are unobtainable elsewhere; many more are very hard to get from any other source; all of them are much clearer and more helpful than most wiring plans available. They include:

- 300 lighting circuit diagrams, and a number of other practical working drawings.
- 300 conduit-wiring diagrams.
- 9 single-phase armature winding diagrams
- 52 two-phase armature winding diagrams
- 100 three-phase armature winding diagrams
- 570 electrical machinery and control wiring diagrams

This Library contains all the useful hows and whys and wherefores for wiremen, trouble shooters, armature winders, electrical maintenance men, and electrical contractors.

A Valuable Book Absolutely FREE

After you have seen these books at your leisure—after you have used them in your work—decide whether or not they are going to help you. Then, return the books or remit only \$1.50 and then \$2.00 a month until \$17.50 has been paid. On receipt of your first payment Braymer and Roe's *Rewinding Small Motors* will be sent you absolutely free.



FREE! if you act now

Braymer and Roe's *REWINDING SMALL MOTORS* comes to you absolutely free if you act now in getting your AMERICAN ELECTRICIANS' LIBRARY. This book will give you much practical information about rewinding all types and designs of fractional horse-power motors.

6 Volumes—over 2,000 pages—fully illustrated
\$1.50 in ten days and \$2.00 monthly for 8 months.

Let us send you these fact-packed books for ten days' free examination. There is no charge for the examination—no obligation to buy the books unless you want them. These books have helped, and are helping, so many men that it is no longer a question of "Will they help you?"—the question is "Will you let them help you?"

Terrell Croft's books on practical electricity are known and respected by experienced electricians throughout the world. This latest Croft library is packed full of practical data, diagrams, kinks, short cuts, helps—to supplement his previous books. These six books are written especially to help wire men, trouble shooters, maintenance men, armature winders and electrical contractors.

The six books cover the whole wiring field. They give you concrete usable details about new and better ways of armature winding, conduit wiring, circuit testing, etc., telling you what experience has proved to be best, showing you what to look out for, what to avoid—outlining for you, step by step the surest, quickest way of locating troubles and of remedying them.

We could fill several pages with arguments telling how so many thousands of men have profited by the American Electricians' Library. But we'd like to leave it to the books—and we'll stand or fall on the outcome of your examination. You will agree that this is a liberal offer, and, frankly, we couldn't afford it if this examination offer didn't usually convince. We know how good these books are—we want you to see them for yourself.

Fill in and mail this coupon now!

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Gentlemen: Send me for 10 days' free examination, all charges prepaid, the AMERICAN ELECTRICIANS' LIBRARY, 6 volumes. If I find the books satisfactory, I will send you \$1.50 in ten days, and \$2.00 a month until the Special Price of \$17.50 has been paid. If they are not what I want I will return them. Upon receipt of my first payment you agree to send me free a copy of Braymer & Roe's *Rewinding Small Motors*.

Signature
Residence Address
City and State.....
Firm or Employer.....
Occupation..... E.C. 12-30

(Continued from page 32)

W. Uschold, president; Otto E. Wangler, vice-president; Willard T. Bettendorf, secretary; and Al Wolf, treasurer.

* * *

New Underwriters' Labels

Underwriters' Laboratories announces a change in the method of labeling armored cable, flexible steel conduit and flexible non-metallic tubing. Armored cable has in the past been labeled by applying labels directly to the armor. The new method of



The new label for armored cable which is attached to the tags on the coils is shown at the left. The old type of label which was applied directly to the cable is shown at the right.

labeling consists of applying labels to tags which are attached to the coils. This method of labeling will be recognized as the same as that which has been so successfully used for many years in labeling rubber-covered wire and other wire products.

In like manner the method of labeling flexible non-metallic tubing and flexible steel conduit has been changed from application to the labels directly to the products to tags attached to the coils.

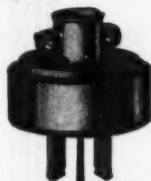
The old label will, of course, continue to make its appearance until the present stock is disposed of. The



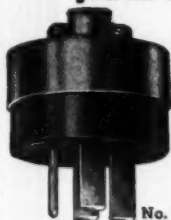
500 HOUSE WIRING JOBS IN ONE YEAR:—This is the record of G. R. Davis, Wilkes Barre, Penna. A few years ago Mr. Davis ran his own lighting campaign with the aid of a firm of lighting sales specialists who placed salesmen out to canvass the entire town for jobs.

Rigidly constructed for use in all types of industrial plants

New!
and improved
CAMPBELL
boxes
receptacles
plugs



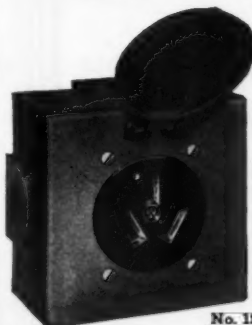
No. 7113 Plug



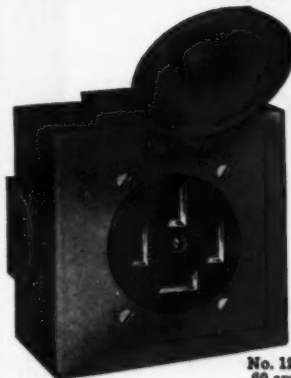
No. 7303 Plug



No. 1240
10 to 20 amperes



No. 1250
30 amperes



No. 1300
60 amperes

Furnished with practically any type of receptacle and plug. In 10 to 60 amperes, either two, three or four wire, with and without grounding features. Campbell boxes, receptacles and plugs are rigidly constructed for use in all types of industrial plants, steel mills, railroad shops, round houses, power stations, etc. Plugs with cord grips, accommodating cords up to 1 1/4" in diameter, are furnished with these new type boxes.

**STEEL
CITY
ELECTRIC CO.**
Pittsburgh
Pa.

You may profitably recommend Steel City products to your customers because of their flexibility, wide range and the great savings that can be effected by using them as standard equipment throughout in all types of electrical installations.

Fretz-Moon



Considerable interest has been shown in a new conduit of the highest quality now being manufactured by Fretz-Moon Tube Co., Inc., Butler, Pa., makers of the well-known Enamelite and Galvite.

Full details will be published in the January issue of this publication, or advance information may be obtained now by writing to

**FRETZ-MOON
TUBE CO., Inc.
BUTLER, PA.**



HEADS MILWAUKEE ELECTRA-GISTS:—R. R. Knoerr, of Knoerr and Fischer, Inc., Milwaukee, Wisc., is president of the Milwaukee Chapter, A. E. I. In the construction business done by his company large work, including fine residences, ventilation and power wiring are treated as specialties.

new label will be issued in denominations of 50, 100 and 250 ft., all three footage labels being identical in design. The new labels for non-metallic tubing and flexible conduit are of the same general design as the new armored cable label the chief difference being in color combinations.

This change standardizes the labeling of many products. Products labeled in this way will now include rubber-covered wire, rubber-covered fixture wire, heat resisting fixture wire, heat-resisting flexible cord, heater cord, flexible cord, non-metallic sheathed cable, tinsel cord, flexible non-metallic tubing, flexible metallic conduit and armored cable.

* * *

Southern California Electragists Meet

The California Electragists, southern division, reviewed the past year's performance record and made extensive plans for next year's activities at its convention at Long Beach, Calif., November 14 and 15, 1930. The convention had been arranged by President Glenn Arbogast, Newberry Electric Corp., Los Angeles, and Frank J. Connolly, executive secretary, for members of the association only and more than 60 delegates from all branches of the southern chapter were represented.

Progress of the jobber relations work since the Ensenada convention

Give Yourself a Christmas Present



While you are choosing gifts for your friends and relatives why not give some thought to your business—it is, no doubt, your principal source of income. Therefore, should receive first consideration.

ARE YOU FED UP?

If you are fed up with PAPER WORK you would like to delegate the troublesome details of pricing to someone else, with a feeling of confidence that your bills will go out promptly and your prices will be fair to you as well as your customers. You can do this with the aid of the NATIONAL ELECTRICAL RESALE PRICE SERVICE.

PAYS FOR ITSELF —AND— PAYS A PROFIT

"We know now that if we had begun using your Service when we started in business we would be able to pay our bills now. We consider it the best investment we have ever made and it is earning profits for us every day in the year." That's one contractor's comment.

INVESTIGATE NOW—IT WILL PAY YOU

If you are really interested in getting ahead during the next year we will gladly send you full particulars, but as the Service is furnished only to those actively engaged in the electrical business, please attach your letterhead to the coupon below.

Henderson-Hazel Corporation,
5005 Euclid Ave.,
Cleveland, Ohio.

Without obligation please send us full information about the "NATIONAL ELECTRICAL RESALE PRICE SERVICE."

Name

Street Address

City or Town

State

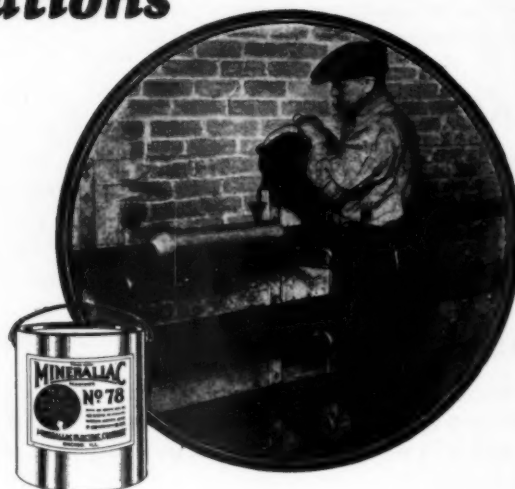
EC 12-30

With High Dielectric Strength



INSULATING COMPOUNDS

**Meet the Most Exacting
Specifications**



Some of its other Qualities

High insulating resistance between conductors and from conductors to ground.

Thoroughly binds itself through cable insulation.

Will not crack or pull away in extreme cold weather.

Nor flow too freely in hot weather.

Displaces all moisture, air and gas.

Remains practically intact or without change in volume.

WRITE for BULLETIN and PRICE LIST TODAY

MINERALLAC ELECTRIC COMPANY

25 North Peoria St.

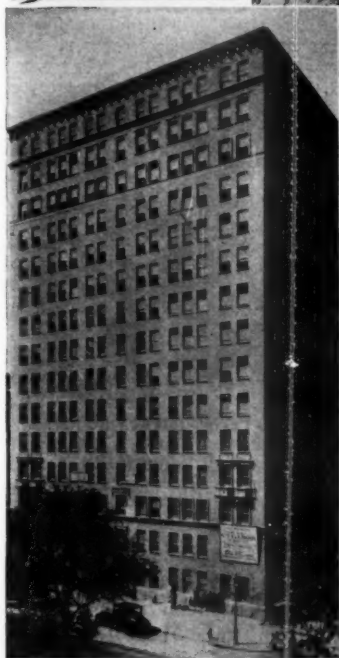
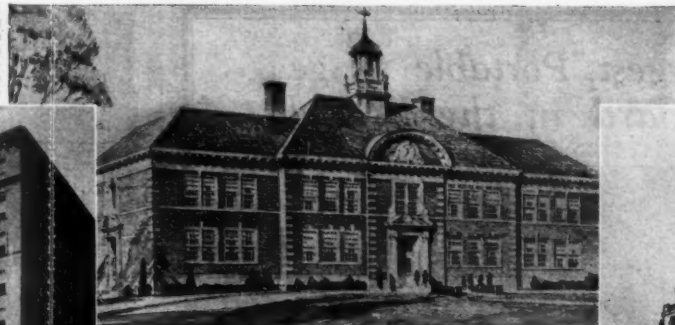
Chicago, Illinois

was reviewed by George Black, San Bernardino electrician and member of the executive committee. The most concrete evidence of progress was the reading of statements from a number of jobbing establishments setting forth definitely their own credit and sales policies. Mr. Black pointed to the necessity for the definition of such policies before it could be enforced and made effective. He made a strong case for reciprocity with the wholesalers whose policies were in the best interests of the contractor-dealer.

R. M. Fry, Los Angeles electrician, reported on manufacturers' policies with particular reference to the air-heater policy work headed up by C. A. Rowley, vice-president of the chapter. This report pointed to the need for market development in electric heating to promote public acceptance. Next it maintained that the contractor-dealer was the logical outlet and that all of the contractor-dealers who were prepared to specialize in electrical heat should be granted franchises for their territory. Such specialists should be protected by list prices, quotations to all buyers, and no direct selling. The question of quantity discount or differential in discount rates for dealers not franchised was also taken up. Failing to obtain any unanimity of policy from the electrical manufacturers as a group, the electricians have determined upon a policy of asking of each individual manufacturer a declaration of his own distribution policy. Declarations from two man-



PRESIDENT FOR TEN TERMS:— On the left, E. H. Reif, president of the Electrical Association of Scranton, who was the first president. His work was so satisfactory that he has been unable to escape the honor for the nine succeeding terms. On the right is Herb Smith, a business competitor.



The Coles School, Glen Cove, N. Y.

Architects — KNAPP & MORRIS

Electrical Contractor — ARC ELECTRIC CONSTR. CO.

1192 Park Avenue
New York, N. Y.

Architect —

ROSARIO CANDELA
Owner — A D'ANTONA

Electrical Contractor —
**ARC ELECTRIC
CONSTRUCTION CO.**

1040 Fifth Avenue
New York, N. Y.

Architect —

ROSARIO CANDELA
Owner —

ANTHONY PATERNO
Electrical Contractor —
**ARC ELECTRIC
CONSTRUCTION CO.**

Youngstown-Buckeye Conduit
used in all these buildings



Specified Again and Again ... Through Merit Alone

DISTRICT SALES OFFICES

ATLANTA . . . Healey Building
BOSTON . . . Chamber of
Commerce Building
BUFFALO . Liberty Bank Building
CHICAGO . . Conway Building
CINCINNATI . Union Trust Bldg.
CLEVELAND . Term 'I' Tower Bldg.
DALLAS . . . Magnolia Building
DENVER . . . Continental Oil Bldg.
DETROIT . . . Fisher Building
KANSAS CITY, MO. . Commerce
Building
LOS ANGELES . 3000 Santa Fe Ave.
MEMPHIS . . . 42 Keel Avenue
MINNEAPOLIS . Andrus Bldg.
NEW ORLEANS . Hibernia Bldg.
NEW YORK . 30 Church Street
Hudson Terminal Building
PHILADELPHIA . Franklin Trust
Building
PITTSBURGH . Oliver Building
SAN FRANCISCO . . . 55 New
Montgomery Street
SEATTLE . . . Central Building
St. Louis . . . Louderman Building
YOUNGSTOWN . . Stambaugh
Building
LONDON REPRESENTATIVE
The Youngstown Steel Products
Co., Dashwood House, Old
Broad Street, London, E. C. Eng.

YOUNGSTOWN BUCKEYE CONDUIT is the leading conduit in the rigid steel conduit world because of merit alone. A special pipe is produced to be used in the manufacture of this conduit. After this pipe has been thoroughly galvanized, it is dipped in transparent enamel, allowed to drain, and then baked at a high temperature, controlled by pyrometers, for a given time. After cooling, a very high grade of black enamel is evenly applied to the interior, and again baked at a high even temperature.

Youngstown-Buckeye Conduit is a big aid in the arrival at profits for any electrical contractor because of the ease and rapidity with which it may be installed. If you are not now using this quality conduit, try it on your next job and you will use it again.

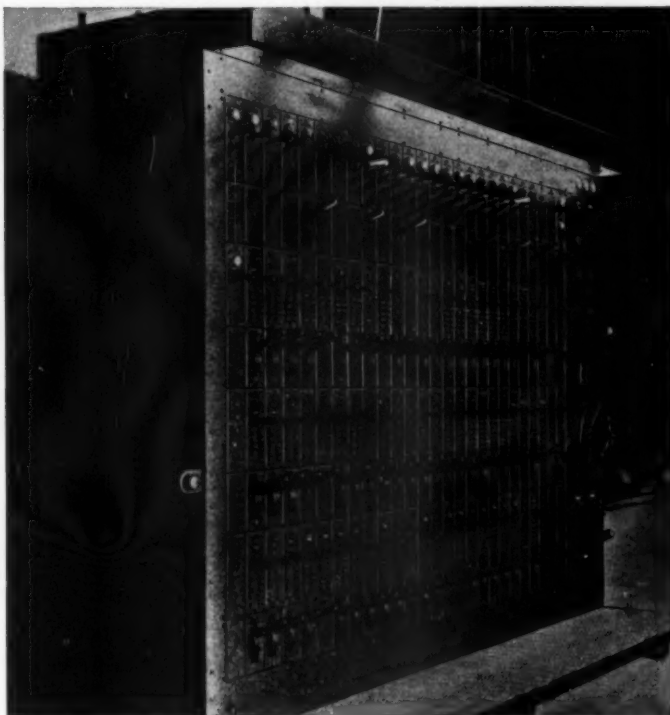
THE YOUNGSTOWN SHEET AND TUBE COMPANY

One of the oldest manufacturers of copper-steel under the well-known and established trade name "Copperoid".
General Offices: YOUNGSTOWN, OHIO

YOUNGSTOWN

GALVANIZED SHEETS PROTECT + SAVE WITH STEEL

The Largest Portable Stage Switchboard in the World



Built by

WURDACK

for the New Orleans Auditorium

The switchboard installation in the magnificent New Orleans Auditorium represents an outstanding example of Wurdack engineering and craftsmanship. The huge portable stage switchboard shown above brings to its disappearing stage a flexibility of lighting control and a command of effects second to none in the country. It is equipped with 80 control units and 100 dimmers, and has a current handling capacity of 700 kilowatts. Twenty flexible rubber covered cables, containing a total of 300 wires, connect it to the terminal cabinet. Despite its weight of over three tons, it can be readily moved to any position on the stage. May we send you our folder which fully describes this Wurdack installation?

WM WURDACK
ELECTRIC MFG. CO.

4444 CLAYTON AVE., ST. LOUIS, MO.

See Sweet's catalogue for nearest branch office.



SELLS MOTOR DRIVES:—R. B. Soderberg, of the Charles H. Leppert Electric Company, Hartford, Conn., sells V-belt drives for motors to industrial plants and at the same time secures additional motor repair business for his company.

ufacturers were read at this meeting and commented upon favorably.

P. R. Mactolf, Mactolf & Doll, electragists, Glendale, and chairman of the Estimators' Section, reported on the electric heating classes to be started jointly by the Estimators' Section, the power companies and manufacturers beginning in December. He stressed the necessity of further knowledge of electric heating installation requirements by contractors to qualify for franchises.

Frank Connolly reported on the national motor section work at the convention and also of the petition recently sent to the large motor manufacturers by the electragists dealing with policy matters brought forth at the previous convention.

Harry Biddle, attorney for a contractors' group in Los Angeles, defined some phases of the law in California as relating to contracting. Particular reference was made to the distinctions in the status of a contractor when he does time and material work and the effect of this status on his lien rights. He also discussed conditional sales contracts binding personal property. He stressed the necessity of having these sales contracts made with the owner and not the contractor of giving a legal description of the property and that they be recorded. He also spoke of work being done in the state for the formation of a California Trade Commission to act in a manner simi-

lar to the Federal Trade Commission in the regulation of unfair trade practices.

The Long Beach electragists with Lou Wetzell as chairman were hosts and provided entertainment for a banquet Friday evening as well as a closing dinner-dance Saturday evening and golf for those participating.

* * *

Standardizes Plastering Around Boxes

At a conference held at the office of the inspector of buildings, Milwaukee, Wis., between representatives of the Contracting Plasterers' Association and the Electrical Contractors and Dealers Association of Milwaukee, it was agreed that lathing and plastering at all electric openings be executed in a manner that will provide greater safety from fire.

It has been the practice in the past to lath and plaster roughly around electrical outlets, leaving openings in plaster around such outlet boxes, thereby permitting drafts to fan sparks into flames which cause ignition of electric wiring insulation, wood lath and stud walls. It was ruled that hereafter all lathing and plastering is to be executed tightly against all electric outlets. Drawings showing the manner in which lathing and plastering is to be executed were



PRESIDENT OF WILKES BARRE ELECTRICAL ASSOCIATION:—Joseph H. Schmidt, Wilkes Barre, Penn., recently did a job in four weeks that was estimated by others at twice that time. This was done by having plenty of up-to-date power tools on the job and by doing all possible work in the shop. "Labor saving tools are the answer of the legitimate contractor to competition," says Mr. Schmidt.

FRINK

MULTILITE REFLECTORS



Buick show room in Mamaroneck, N. Y. equipped with Frink Multilite Reflectors, as follows: 2—10 light reflectors; 2—4 light reflectors; 3—8 light reflectors.

There are quick... sure profits in work like this

The installation of Frink Multilite Reflectors in the show room illustrated above made a quick, sure profit for the contractor who was smart enough to recommend their use. This is just another instance of the vast amount of store illumination work available if you go after it with Frink reflectors.

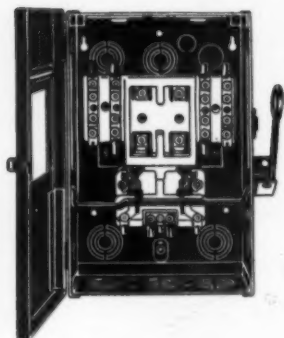
Multilite is a unit fixture, consisting of a series of Silverlite Reflectors mounted in a metal trough, completely wired and ready to install. From two to ten reflectors come as a unit, wired with two circuits permitting of alternate and multiple control. Various intensities and color effects are easy to achieve. Send for circular 79-B for complete information.

THE FRINK CORPORATION

23-10 Bridge Plaza South

Long Island City, N. Y.

WADSWORTH



Catalog No. 1843
Accessible Fuse Type
60 Ampere Size

ACCESSIBLE FUSE SAFETY SWITCH

Study the above illustration and note the important details of construction. A sturdy well constructed—Safety—Switch with knockouts that are easily and cleanly removed. Jaws, blades and wiring terminals in clear sight, handy for wiring and easy to inspect.

A—Safety—switch that will assist contractors in bringing their installation to a higher standard and do it efficiently and economically.

Bulletin No. 21 giving complete information will be mailed on request.

The WADSWORTH ELECTRIC MFG CO. INC.
Corington, Kentucky.

There is a Wadsworth Switch for Every Installation



INDUSTRIAL SPECIALIST:—Photo of M. E. Arnold, Philadelphia contractor who specializes in electrical improvements for mills, factories, and institutions. Mr. Arnold recently ran a direct mail campaign which brought unusual results in additional business.

sent to all lath and plaster and electrical contractors.

The most important requirement is that all wood lath and plaster board be applied so that it butts tightly to electric outlet boxes. No wood lath or plaster board should, at any time, be placed over electric metal straps or strips. In each instance, the lath or board is to be butted against such straps and where outlet boxes are equipped with a shoulder or split strap, wood lath or plaster board is to be inserted in the same.

In the future approvals of lathing and plastering in buildings in Milwaukee will be withheld unless this work is executed properly.

* * *

5-Day Week Planned by Milwaukee Contractors

The Electric Contractors' and Dealers' Association of Milwaukee, Wis., has put into effect immediately a plan for a 5-day week for all of its members. Practically 500 electricians in Milwaukee will be affected and through lessening the number of hours worked each week, about 50 additional men will be employed.

The purpose of this plan is to give men work, if only for a period of a day or so, that each can earn at least a day's wages. The idea is to pay the men on the day they do the work and not have the work accumulate and save it to give steady employment to a few. If the present system does not take care of all the men, the board of directors will adopt a

Modernize

Merchants in every line of trade are being urged to modernize their stores. . . . No better, cheaper, quicker way for a store to modernize than by improving the lighting. . . . In your community are a dozen merchants who ought to re-light. . . . They KNOW they ought to re-light because their own trade papers have told them so—they are already half sold on the idea. . . . Go to these merchants with a clean-cut, definite proposition. . . . Recommend Wakefield Bronze Embossed to grocery and hardware stores—Wakefield Modernistic to department and drug stores. . . . Don't be cheap. . . . Recommend plenty of large lamps, good Wakefield equipment. . . . Get your price. . . . Pocket your profit. . . . Remember, when it's hard to sell lighting it is easy to sell RE-lighting. . . . Start after that re-lighting business today.



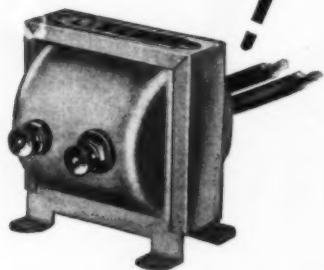
Send for Data Sheet No. 900 on

Modernistic

◆◆◆◆◆◆◆◆◆◆ MANUFACTURED BY

THE F. W. WAKEFIELD BRASS COMPANY
VERMILION, OHIO, U. S. A.

NEW



The New Liberty Trouble Free Bell Ringing Transformer

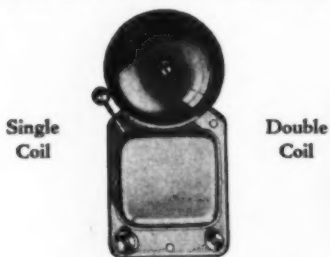
A thousand times or more we've been asked "Why don't you fellows bring out a transformer of Liberty Quality and Liberty price?"

Here is our answer—The new TROUBLE FREE Liberty transformer. We can't possibly tell you even a small part of its virtues in this limited space. The coupon below, however, will bring you full details and prices. Don't take a chance on forgetting it, clip and mail it now.

Primary 110 volts A.C., 50-60 cycle.

Secondary 8 volts A.C.

Door Bells and Buzzers



A complete line of door bells, buzzers and duplex combinations to meet every requirement. These bells and buzzers are fully guaranteed and are recommended by contractors everywhere.

**"Over a Million Liberty Bells
Now in Use"**

CLIP AND MAIL TODAY

THE LIBERTY BELL MFG. CO.
Minerva, Ohio.

Gentlemen: Kindly send me bulletins and price lists of your complete line of Bell and Buzzer combination, Bells and Buzzers. Also your new Trouble Free Transformer.

NAME.....

ADDRESS.....

CITY.....STATE.....

rotating scheme whereby every worker will have his chance at some piece of work, if possible at least a couple of times each week.

It is further expected that contractors not in this organization will follow this plan and that the ultimate result will be beneficial to all of the electrical workers of Milwaukee.

* * *

New York State Contractors to Meet

The semi-annual meeting of the New York State Association of Electrical Contractors and Dealers, Inc., will be held in New York City on January 14, 1931.

Members in attendance at the meeting will be invited to the 27th annual installation and dinner of the Independent-Associated Electrical Contractor-Dealers, Inc., to be held at the Hotel Astor on the same night.

* * *

Cincinnati Red Seal Plan a Success

A report on the recently inaugurated Red Seal campaign of the Cincinnati Electric Club shows that a gain of 79 per cent was made in the number of outlets and switches over the number originally recommended by architects and builders. The report covers 78 homes.

In these homes light outlets were increased 59 per cent, switch outlets 95 per cent, convenience outlets 99

per cent, or a total gain of 2,669 outlets. The report shows an increase of 24 Red Seals for October over September and an increase of 18 applications for Red Seals for the same period. The board of trustees voted to reinstall the present Red Seal campaign committee for another year.

* * *

New Boston Range Wiring Plan

The Boston Edison Co., Boston, Mass., has announced a new range policy. When ranges are sold by the company, wiring specifications are submitted for bids from three contractors who have an established business in the municipality where the range is sold. If there are not three contractors in the municipality, the specifications will be sent to nearby contractors so as to make up a total of three bidders as required.

Upon approval of the electrical work, the company will pay the contractor.

Ranges sold directly by the contractor-dealers will be handled the same as though the company had sold them, provided the dealer maintains the list price and that the wattage conforms to the company's rules.

On dealer's range sales, when the dealer wishes to do the wiring, the company will reimburse him for the cost of the wiring provided that the amount does not exceed \$65.00. In case the estimate is in excess of



HUDSON-MOHAWK LEAGUE MEETS IN NEW YORK CITY:—The Hudson-Mohawk Electric League of Albany, N. Y., and surrounding towns held its regular monthly meeting at the Westinghouse Lighting Institute, New York City recently. The program consisted of an inspection tour of the Institute where Arthur E. Allen, vice president of Westinghouse Lamp Co., formally welcomed them. They were guests of the Institute at lunch where Earl Whitehorn, president, Electrical Association of New York, Inc., spoke on "What is the Most Important Factor in the Electrical Industry?" On their return to the Institute L. W. Davis, general manager, Association of Electragists, spoke on "Salesmanship in the Electrical Industry," and D. W. Atwater, commercial engineer, Westinghouse Lamp Company, gave an illustrated talk on "Industrial and Commercial Lighting."



SPECIALIZES IN STORE MAINTENANCE:—The Electric Shop, Reading, Penna., specializes in maintenance in stores and residences. Chain grocery companies, gas stations, etc., are among their customers as well as individuals.

\$65.00, the company reserves the right to have two other contractors bid on the work and award the work to the lowest bidder.

* * *

Palm Beach Electragists Enter Third Year

The Electragists of Palm Beach County, Florida, are entering their third year as a chapter and have recently elected the following officers: A. M. Terry, president; J. R. Hime, first vice-president; J. Harper, second vice-president; M. Gaughan, treasurer, and W. E. Tunncliff, secretary.

Since the formation of the chapter, the initiation fee has been raised from \$5.00 to \$50.00, and a new system of submitting bids to general contractors has been put into effect.

* * *

Columbus League Elects Officers

At the first annual meeting of the Electric League of Columbus, Ohio, held at the New Southern Hotel recently, the following officers were elected: Marion A. Bridge, Jr., president, Hughes-Peters Electric Co., president; Arthur Loeb, president, Loeb Electric Co., vice-president; Henry Emswiler, Emswiler Electric Co., treasurer; E. E. Evans, Eastern Electric Co., secretary, and William G. Hills, re-elected manager.

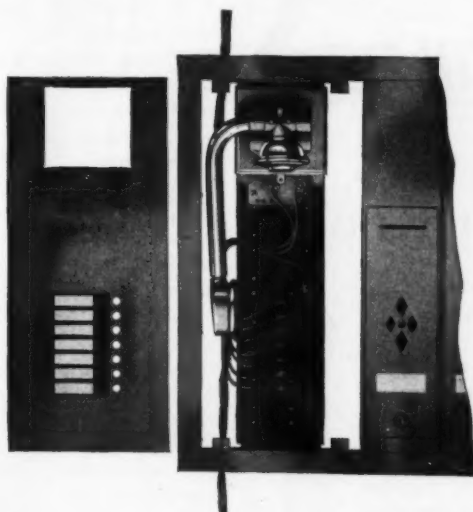
Directors of the league are: J. A. Davis, General Electric Co.; Ray B.

Couch
TELEPHONES
ESTABLISHED 1894

APARTMENT HOUSE VESTIBULE 'PHONES

..... and

MAIL BOXES



Couch Vestibule 'Phones are FRONT CONNECTED. This feature not only saves the contractor a whole lot of time but assures a much more efficient job than can be obtained from a back connected outfit. Note the moulded bakelite button blocks, the new card holder, and other exclusive Couch features.

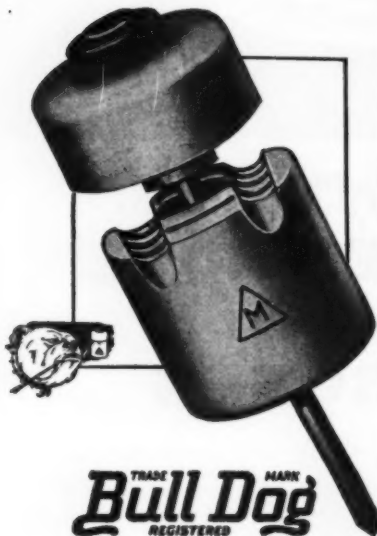
Three types of Vestibule 'Phones are listed: Swing Arm type (illustrated), Cordless (Loud Speaking) type and Armored Cord type.

Bulletin No. 89 gives the whole story. Write for your copy today.

S. H. COUCH COMPANY, Inc.

NORFOLK DOWNS, MASS.

"It has a grip like it's namesake"



Split Knobs

THESE are the safe, approved knobs for all types of residence wiring. They mean better jobs at no added cost. Bull Dog Split Knobs, together with Illinois Porcelain Tubes, Cleats and Solid Knobs form a complete line of standard porcelain.



Sold Through Wholesalers

Illinois Electric Porcelain Co.
Macomb, Illinois

Foster, Foster Electric Co.; Jeff Goldsohl, Budd & Co.; C. B. Ketchum, Westinghouse Electric & Mfg. Co.; William Wells, vice-president, Columbus Railway Power & Light Co.; E. E. Evans and Henry Emswiler.

* * *

Youngstown League Changes Bulletin's Name

"The Co-Operator" is the new name of the bulletin published semi-monthly by the Electrical League of Youngstown, Ohio. The new title was chosen because one of the primary functions of the league is to promote harmony and cooperation between the different branches and among members of each group of the industry.

* * *

Southwest Inspectors Adopt Adequacy Resolution

At the regular annual meeting of the International Association of Electrical Inspectors, southwestern section, held in Pasadena, Calif., recently, the members adopted a resolution regarding "adequacy" as follows:

"Whereas: It is the sense of this association in meeting assembled that adequacy is one of the prime factors in procuring freedom from life and property hazard in electrical installation, and

Whereas: We believe that if adequacy is made a feature of all electrical work a very large percentage of the prevailing hazards will be eliminated; therefore

Be it Resolved, That this association recommends the public utilities, the Electragists, the manufacturers,



SPECIALIST IN COMMERCIAL AND INDUSTRIAL WIRING: Jack Romanoff, left, Al N. Rosen and Mary Davis of the Romanoff Electric Co., Toledo. This company has installed considerable wiring in industrial and commercial buildings, including the Lucas County Infirmary, the Burrough School, Toledo Edison Service Station, Rosemary Apartments and the Surface Combustion Factory.

SHOWCASE LIGHTING

For T-6½ Intermediate base lamp.



No. 80

No. 80 Showcase unit is 8½" long, 1¾" high and 1¾" wide—Standard finish statuary bronze plate.

BANK LIGHTING

For two standard lamps to 25 watt.



No. 1012

Cashier cage reflector No. 1012 is 18" long, 3¼" high and 4¼" wide, with twin brass pull chain socket and diffusing glass bottom. Standard finish, statuary bronze spray.

PICTURE LIGHTING



No. 720

No. 720 picture reflector is 9" long for one standard base tubular lamp. Furnished wired complete with 9 feet silk cord and plug.

INTERIOR ELECTRIC SIGNS

No. 2000



Interior electric signs are available in single and double face types with a variety of glass faces and mounting arrangements. For more data on the Day-Brite line ask your jobber for a Day-Brite catalog or write directly to us for one.

REFLECTOR DAY-BRITE COMPANY
3825 Laclede Ave. - Saint Louis

UNION RENEWABLE FUSES



New Ferrule Type Union Renewable Fuse.
Besides the link there are only three parts—casing and two one-piece end caps.



Knife-blade type
Union Renewable
Fuse

NEW HANDY FUSE WRENCH

The handiest tool for tightening and loosening ferrule type renewable fuse caps. Comfortably-sized hard wood handle, with hole in each end—one for fuses of 1 to 30 amp., 250 volt size; the other for 31 to 60 amp., 250 volt, and 1 to 30 amp., 600 volt. Your wholesaler has it.

SAVE

.. IN RENEWAL TIME
.. IN YEARLY FUSE COSTS

To all outward appearances, renewable fuses may look alike. It's what's inside that makes the difference. Take the new ferrule type Union Renewable Fuse, for example. It has no loose washers or end plugs. The end caps are one piece, assuring positive contact with the fuse clips. Venting is through the end caps—no threads. Both ends are open for inspection and cleaning. The link is slightly rounded at ends for quick, easy insertion. Too, it is supplied bent at one end for automatic length adjustment and perfect fit, is held diagonally in the heavy horn fibre casing. It cannot be put in any other way. It cannot touch or char the fibre. These hidden features of superiority assure long fuse life, quicker renewals, lower yearly fuse costs.

• • • • •

The knife-blade type Union Renewable Fuse gives the same full measure of savings in renewal time and fuse costs. When a knife-blade type fuse "blows", the simplified design and minimum number of parts make insertion of a new link but a matter of seconds—less "time out" for both men and machines. Simply remove one end cap. The other cap remains on the knife-blade. The notched ends of the links permit speedy renewals when studs are only slightly loosened. And the rugged construction, together with an exclusive method of venting through the fibre, insures continuous use after repeated blowouts.

On your next order it will pay you to specify Union Renewable Fuses because they give better and longer service at less cost.

IT PAYS TO
SPECIFY "UNIONS"

JEFFERSON ELECTRIC COMPANY

1503 W. 18th Street, Chicago, Ill.

(A-1019)



Trester Air Cooled Transformers

For
LIGHTING
SYSTEMS and other
INDUSTRIAL USES

NO oil—no special fireproof vaults—no special hangers—no maintenance or replacement charges—economical in operation—easy to install—can be hung on wall or mounted directly over lighting circuit cabinet. All come equipped with standard conduit connection—no extra fittings—conform to all electrical codes.

Single phase, two phase and three phase transformers. 115, 230, 460 and 550 volts.

Transformers designed for special purposes.

Send for our
Bulletin 630

Representatives desired in principal cities and Industrial centers.

TRESTER SERVICE ELECTRIC CO.
235 E. Odgen Avenue at Market Street, Milwaukee, Wis.

"Trester Service Since 1908"



DOING LARGE HOSPITAL JOB:—
P. L. Elias, of Hoffman & Elias, New York. This firm is now working on the new Jersey City Hospital, maternity annex and nurses' home. The hospital is 17 stories high and with the work of the other two buildings the company has one of the largest jobs in the East.

the Society for Electrical Development, and other similar organizations to use every effort to give the utmost publicity in all their advertising to the necessity and advantages of adequacy in electrical installations, to the end that the public may profit to the fullest extent in the use and advantages of electric service."

* * *

League Regional Conference Held

Members of the league council have discussed on a number of occasions the desirability of holding regional conferences of league managers and others interested to be called by members in their respective territories.

The first conference of this nature was held in Albany recently and was convened by J. H. Van Aernam, league council representative for New York state, in district No. 2. The first meeting was confined to the secretary-managers of leagues operating in New York state, later meetings to be broadened to include field men and others interested in market development work.

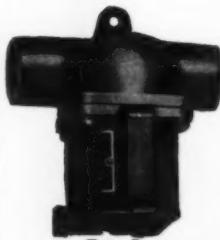
There were seventeen men present and the program consisted of a brief presentation by selected leaders in the league movement of subjects of special interest to league men, which were followed by exhaustive discussions of various points touched upon. The speakers were G. D. Munger of Poughkeepsie, H. H. Smith of Binghamton, S. S. Vineberg of Buffalo, O. C. Small and J. S. Bartlett



Type A



Type B



Type C

RUGGED RALCO RECEPTACLES



Type PRG Plug

The Circuit Breaking Receptacles and Plugs illustrated, have self-aligning floating contacts, arc resisting insulators, self-closing covers, and separate terminals for protective ground.

Very easy to wire, made in 2, 3 and 4-Pole, 30 and 60 Ampere. Approved for use on both 250-Volt D.C. and 600-Volt A.C. Circuits.

If you do not have our Catalog and Bulletins, write for them.

Ralco Manufacturing Company

Designers & Manufacturers

125 No. Albany Ave.
Chicago, Ill.



Type D



Type H



Type HF

of the Society of Electrical Development. The subjects included the status of the league movement in New York state; adequate wiring promotion; special campaigns to promote range sales; arousing interest in the electrical industry by keeping member companies informed on league operations; how to obtain a greater measure of financial support, etc.

* * *

Create Board of Trade Claims

After a year of negotiations, representatives of the building trades department of the American Federation of Labor and the National Association of Building Trades Employers signed an agreement in Washington yesterday for the creation of a national board of trades claims. The new board is designed to prevent strikes in jurisdictional trade disputes by means of arbitration.

The board, which will serve as a supreme court of appeals, will take office Dec. 15, after the agreement has been submitted for the signatures of all individual international trade bodies, as well as employers' associations. The agreement was signed by M. J. McDonough, president, and W. J. Spencer, secretary, for the trades, and David T. Riddle, president, and E. M. Craig, secretary, for the contractors' association.



BUSINESS BUILT ON "SUDDEN SERVICE" IN TROUBLE SHOOTING JOBS:—Lawrence Donovan, of Boston, has made a study of giving quick service. "It's half the battle in holding old customers and getting new ones," says Donovan.



No. 110 non-adjustable water-tight floor box.



No. 120 Adjustable Water-tight Floor Box without receptacle.



No. 130 adjustable water-tight floor box.



No. 160 floor box. 20 amp., 2 wire.



No. 175 floor box. 30 amp., 2 wire.



No. 180 floor box. 30 amp., 3 wire.

LET US KNOW

When you need Floor Outlet Boxes. We will be glad to quote on your requirements.

USE THE COUPON BELOW

"LATROBE" FLOOR BOXES

are designed to save labor and to meet your requirements. Installation in the finest buildings throughout the country is real proof of superiority.

Carried in stock by over 300 Distributors.

Fullman Manufacturing Co.
Latrobe, Pa.

Mail this Coupon Today

FULLMAN MANUFACTURING CO., Latrobe, Pa.

We are in the market for Floor Boxes. Send us your catalog and a FREE copy of the 1930 Nat'l Elec. Code.

Name.....

Address.....

City..... State.....

Our Jobber is.....



Meier Nu-air
TRADE MARK REGISTERED

WE face the future undaunted by the present. We believe in the soundness of our country and the return of business prosperity.

We believe that those who will prosper most are those who prepare now.

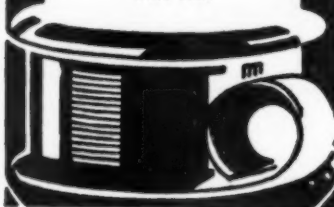
The fan business is a year-round profitable business. Every store, every restaurant and every industry has ventilating problems.

Given a fan of the quality and efficiency of the Meier Nu-air, a good margin of profit and plenty of factory co-operation and you can't help but make money. We know what others have done.

Write us today

**MEIER
ELECTRIC &
MACHINE CO.**

3525 E. Wash. St.
Indianapolis, Ind.
INC. 1904



REMODELS SOUTH STATION IN BOSTON:—Charles Pearson, of the Lord Electric Co., Boston, superintending the job is standing in the foreground. 147 800-watt ceiling outlets were installed, as shown in the upper left hand corner of the picture. Electric track indicators and bulletin board also form a part of the installation.

Pekin, Ill., Appoints Electrical Commission

Mayor L. B. Kinsey of Pekin, Ill., has announced the appointment of an electrical commission comprised of Peter Schrock, building commissioner, chairman; J. F. Jaekel, fire chief; W. M. Beardsley, representing the Central Illinois Light Co.; Walter Flick, contractor; and Frank May, journeyman electrician, to recommend provisions for an electrical supervision ordinance.

* * *

8,000 Inspect Washington's Electric Home

One of the important activities of the Electric League of Washington, D. C., was a model electric home, which was very successful. Nearly 8,000 people visited this home during the two weeks of its exhibit.

* * *

Rhode Island League Pro- motes Electric Homes

The Electrical League of Rhode Island, Providence, R. I., has acted as an organizing medium for several new types of new electrical homes, whereby the contractor-dealer supplies the electrical equipment, wiring, lighting fixtures and such major devices as he is selling, and the operation is under his own auspices. The league acts as an advisory promoter of the home, and secures necessary furniture, accessories, etc., to put the

don't do Half a job

when specifications call for rigid conduit, do the job to last permanently, use

**"GALVADUCT"
or
"LORICATED"**



Look
for the
Trade Mark

the original all steel rigid
conduit made by

GARLAND MFG. CO.

Pittsburgh,

Penna.



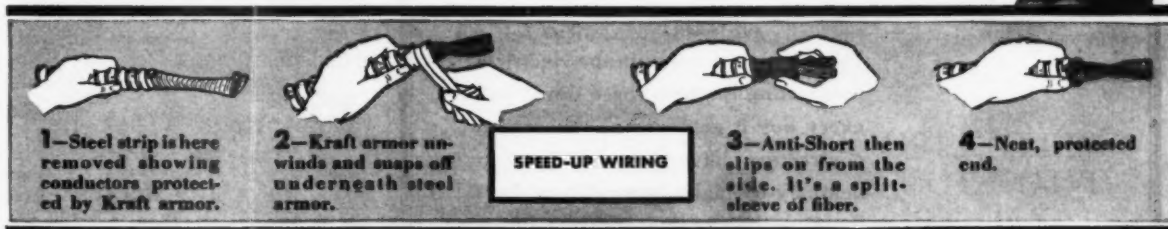
"BX" IS AN OLD FRIEND

Nearly a third of a century ago men of the industry began using "BX" armored bushed cable for economy, speed of installation, dependability. Today they buy the improved "BX" for the same reasons.

Its extremely flexible steel armor makes "BX" easy to fish in old work—sharp turns can be made without difficulty in new work, and it cuts and strips with ease.

And General Electric Quality is *always there* for "BX" is made completely by General Electric from its code wire core to its jacket of galvanized steel strip.

It's an old friend to thousands. It can be yours, too. Let us tell you all about "BX." Write section C-2912, Merchandise Department, General Electric Company, Bridgeport, Connecticut.



GENERAL ELECTRIC

▶▶▶▶▶▶▶▶ **"BX" Type** Licensee Patent No. 1,067,013 **ARMORED BUSHED CABLE** ◀◀◀◀◀◀◀◀

Reg. U. S. Pat. Off.

MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT

In St. Louis

Hotel Mayfair....

8th and St. Charles

In the center of theatre and shopping districts. Floor lamps, fans, circulating ice water in every room. The quiet, refined atmosphere of an exclusive club—an hotel of distinction. Dining room. Coffee shop. Garage service.

400 ROOMS — \$3⁰⁰ to \$6⁰⁰
BATHS

Hotel Lennox....

9th and Washington

St. Louis' newest and smartest hotel opened September 3rd. In the heart of business district. Dining room. Coffee shop. Garage service.

400 Rooms with tub — \$3⁰⁰ to \$6⁰⁰
bath and shower

Hotel Kings-Way...

West Pine at Kingshighway

Opposite beautiful Forest Park. Near bus, street car and motor highways. 20 minutes from downtown. Club breakfasts, table d'hôte dinners. Rooms for two from \$4. Special rates for permanent guests.



Heiss Hotel System KMOX

Beating Competition with Brains

Competition is tough in the electrical contracting business these days; and every day it gets worse. Successful contractors have found they can beat fly-by-night competition best by using their brains, and by educating their responsible employees. You can help your head men to keep abreast of the times and save you money by sending each his own copy of ELECTRICAL CONTRACTING.

plan over. The league also helps the dealer to get co-operative advertising from the builder, real estate operator and other sub-contractors who are interested in this home.

Rhode Island also had its first all electric apartment recently where electrical cooking, refrigeration and devices were on display, along with a Red Seal wiring apartment. One apartment was fitted up by a furniture house as a model, and the public was invited to view this model.

* * *

Reading League to Offer Christmas Prizes

The Electrical League of Reading, Pa., will again offer prizes for the best Christmas displays of decorative lighting in private homes. Last year \$700 in prizes was given away and this contest materially aided the local contractor-dealers because of the resulting increased sales.

* * *

Lincoln League Promotes Christmas Lighting

The Lincoln (Neb.) Electrical League is promoting a Fall Christmas tree lighting campaign, and is urging more outdoor lighting of Christmas trees this year than ever before.

A better home lighting campaign is in progress and the league, in conjunction with the other building

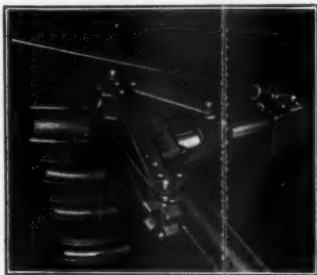


DOING A BIG JOB IN A SMALL CITY:—R. E. Cook is a power specialist in Owosso, Mich. He concentrates on power installations, and all motor work, especially re-winding and repairs. This year his specialization has been rewarded by an unusually busy season.

Make Money With Greenlee CONDUIT BENDERS



Greenlee Conduit Builders make money for electrical contractors by reducing tremendously the time consumed on every bending job. Conduit is bent by hydraulic pressure, forcing a shoe against the pipe. Every bend is left round and true, with little or no distortion in the metal. Conduit is bent horizontally—there being practically no limit to the amount of bend. These benders are easily portable and can be readily carried from place to place. Prices are very reasonable—in fact no contractor can afford to be without one. Built in two sizes for different classes of work. Mail the coupon today for detailed information and prices.



No. 770 bends $1\frac{1}{4}$, $1\frac{3}{4}$, 2, $2\frac{1}{2}$ and 3-inch conduit.

No. 775 bends $3\frac{1}{2}$, 3, $3\frac{1}{2}$, 4 and $4\frac{1}{2}$ -inch conduit.

GREENLEE CONDUIT BENDERS

GREENLEE TOOL CO.
Rockford, Ill.

Please send complete information and prices on your Conduit Benders.

Name.....

Address.....

City.....

Jobber or Dealer.....

12-30



CATERS TO SILK INDUSTRY:— W. C. Stanton, Penn Electrical Engineering Company, Scranton. This firm specializes in maintenance and construction work in the silk mills. The basement repair shop of this firm has more natural daylight than in any similar shop we have seen. Snapshot was taken in the basement without the use of artificial light.

trades, is promoting the building of better homes in Lincoln. A building program has also been planned for the coming year.

* * *

Utah League Has New Headquarters

The Electrical League of Utah, Salt Lake City, has moved from the Newhouse Hotel to the fourth floor of the Chamber of Commerce, where it has taken office space and a meeting room. In addition to the league headquarters, several civic associations have also taken office space in this building.

* * *

St. Paul Contractor-Dealers Hold Appliance Week

The Master Electrical Contractor-Dealers' Association of St. Paul, Minn., recently held appliance week which started November 24 and ended November 29.

During that week the association acted as a clearing house for all plans suggested by people interested; issued bulletins showing progress of the campaign; developed publicity for newspapers, etc.

The association also arranged through the jobbers to have factory demonstrations and representatives in St. Paul for the week's activities. A supply of dealer helps and window trimming material was also furnished.

ENLARGE Your Knockouts

IN
 $1\frac{1}{2}$ MIN.

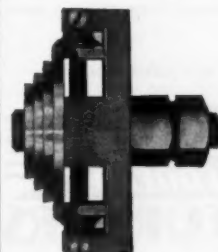
NO
DRILLING

NO
FILING



Enlarge knockouts in a minute and a half or less and save from several minutes to over an hour on each hole cut with the Greenlee Knockout Punch. No drilling, reaming or filing is necessary. Cutting is done by a two-point punch, driven by screw action through the metal into a die of proper size, leaving a clean-cut hole.

Sets are conveniently packed in leather cases in the following assortments: No. 735 for $\frac{1}{2}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ -inch conduit. No. 737 $1\frac{1}{2}$ and 2-inch conduit. Operation is simple and requires only a common wrench. Mail the coupon today asking for prices and complete information.



The Knockout Cutter shown to the left operates just as easily and enlarges holes just as quickly as the Knockout Punch. It will enlarge holes to fit $1\frac{1}{2}$, 2, $2\frac{1}{2}$ and 3-inch conduit.

GREENLEE KNOCKOUT TOOLS

GREENLEE TOOL CO.
Rockford, Ill.

Please send complete information and prices on your Knockout Tools.

Name.....

Address.....

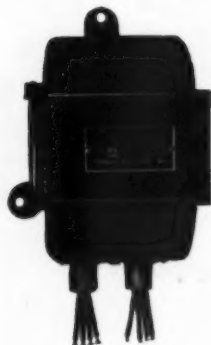
City.....

Jobber or dealer.....

12-30

Modernize

with *Air-Cooled*
Transformers



Worth-while economies can be effected by supplying 110 volts for lighting, portable tools, apparatus, from 220, 440 or 550-volt A. C. power circuits, with SORGEL Air-Cooled Transformers.

The voltage best suited for each type of apparatus will assure you greater efficiency, reduction in maintenance, greater safety.

Standard Sizes $\frac{1}{4}$ to 50 KVA.

Other sizes built to order

Single-phase, 2-phase and 3-phase

The reason SORGEL Transformers can be installed easily and economically in any convenient place inside of buildings, is because they're Air-Cooled. No enclosures or fire-proof vaults to worry about. No oil. No upkeep.

Approved by Underwriters

SORGEL

AIR-COOLED
TRANSFORMERS

WITH CONDUIT CONNECTIONS

Also Complete Line of Air-Cooled

Booster Auto Transformers
for A. C. Network Systems
Sizes 1 to 500 KVA.

Transformers Designed for Special Applications

Sorgel Electric Co.

Clybourn and W. Water Sts.
Milwaukee, Wis.

Cincinnati Contractors Meet Daily

The Cincinnati Electric Club, Cincinnati, Ohio, has arranged for a special table each day in the main dining room of the Chamber of Commerce, to be known as the Cincinnati Electric Club Table. This table is set aside for contractors and men connected in the electrical industry to get together and discuss problems and enlighten each other as to what the various branches of the industry are doing daily. A prominent sign is displayed having the emblem of the Cincinnati Electric Club, with the slogan "Work Together and Win Together."

Toronto League Issues Lighting Folder

The Electric Service League of Toronto has issued a folder entitled "Is Your Plant Electrically Modern?" which is profusely illustrated, showing good and bad lighting in industrial plants and illustrating proper electrical equipment for factories. In addition a table of Franklin Red Seal illumination standards is included in this folder giving lighting intensities for various classes of industrial operation.

Industrial Lighting Promoted

The Electrical League of Rhode Island, Providence, R. I., is promoting industrial lighting in Rhode Island, using the Franklin plan as a basis, and the Franklin letters for direct mail to 850 industrial plants



WIRES 275 APARTMENT BUILDING—E. R. Breme, Philadelphia contractor, is now busy wiring one of the largest apartment buildings in that city.

Keep Your Name Before
Electrical Workers
PUT IT ON

Test-O-Lite

— and give this indispensable instrument as a Christmas remembrance.



Neat as a Fountain Pen

TEST-O-LITE is a practical pocket-tester for testing high resistance leaks up to 20 megohms.

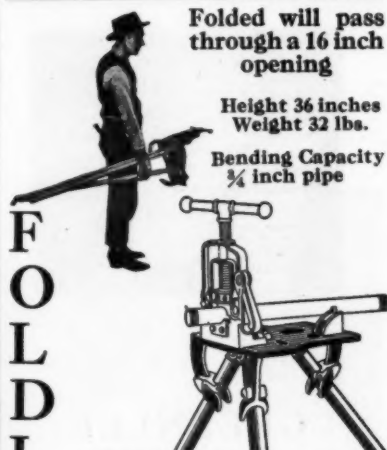
It instantly detects burnt out fuses on all circuits from 110 to 550 volts A.C. or D.C., locates light and motor troubles, faults in electrical appliances, auto spark plugs and radio sets and tells the difference between A.C. and D.C. current. It is guaranteed for a lifetime.

TEST-O-LITE is protected by U. S. Patent No. 1,778,883. Infringers will be prosecuted.

List Price \$1.50

**L. S. BRACH
MFG. CORP.**

Specialists in Electrical Protective Devices for 24 Years.
Newark, N. J., U. S. A.
Toronto, Canada



Folded will pass
through a 16 inch
opening

Height 36 inches
Weight 32 lbs.

Bending Capacity
 $\frac{3}{4}$ inch pipe

The "Handy-Andy" Vise Stand folds up, has no loose parts and is easily carried from job to job. Is light yet unusually strong and rigid. No drilling necessary to fasten standard hinged or chain vises to it. A big time saver on the job. Fully guaranteed. Accept no substitutes. Order from your jobber.

"HANDY-ANDY"

WISE STAND

WESTERN WIRE PRODUCTS CO.
3rd and Spruce Sts.
ST. LOUIS, MO. U. S. A.



SAVED MONEY FOR CUSTOMER:

—Charles M. Watson of Philadelphia recently had a call from an industrial plant in regard to a small job. While there he looked over the plant and showed the owner how a large saving could be made by correcting the power factor and using the wholesale rate for current. With this fact as a selling point, it was easy to land a large industrial job. The owner's bills were reduced from \$350 to \$105 per month.

in Rhode Island. The campaign is being backed up by twenty specially prepared newspaper advertisements in the important newspapers in the larger cities of Rhode Island. Manufacturers, contractors and jobbers are all following this with their own direct mail appeal and personal solicitation work.

San Francisco Lighting Engineers Meet

Designed to show the importance of illumination to the electrical industry, the Illuminating Engineering Society, San Francisco Bay Cities Chapter, recently held a meeting at which it entertained executives of power companies, wholesalers, and contractor-dealer establishments. The meeting, which was held at the Engineers' Club, San Francisco, was presided over by William Hanbridge, of the Pacific Gas and Electric Company, president of the chapter.

William P. Bear was the principal speaker, describing the results of surveys he had made on illumination promotion of the Pacific Gas and Electric Co. over some period of time. Several figures given by him were of significance to the industry. From P.G. and E. records he claimed that for every kilowatt connected to the lines of the company \$106 in materials

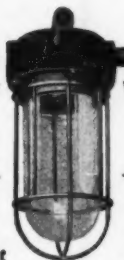
Here's an Extra Good Fitting for Extra "Tough" Places

VAPOR-PROOF—FULLY APPROVED—RELIABLE

All unused outlets closed by threaded flush plugs.

Bronze threaded guard-ring does not corrode or stick.

Stout guard protects outer globe and lamp from mechanical injury.



Four threaded Outlets per fitting.

Lamp-socket joint gasketed. Vapor-proof even if globe and lamp are broken.

Thick outer globe keeps out dust and condensation of outer air moisture.

ADAPTi Vapor-Proof

Fitting 9150-100.

Also a Full Line of ADAPTiLETS, (Standard Solid Fittings;) THREADLESS ADAPTiLETS; and ADAPTi BOXES, (Flexible-Rigid Fittings)

The ADAPTi Co.

2996 East 72nd Street, Cleveland, Ohio

NEW YORK—A. Stone, 112 E. 23rd St. BOSTON—E. R. Bryant, 52 "B" St.

CHICAGO—United Electric Sales Co., 300 West Adams St.

PHILADELPHIA—Craven Electric Sales Co., 30 Bank St.

See Our New Catalog!



This, the largest and most complete catalog we have ever issued, contains invaluable illuminating data as well as complete lists, descriptions and illustrations of Quad Standard and Special Units.

Quad designers and engineers are alert in meeting modern needs with new ideas. For instance, all Q-D Socket Fittings now are equipped with pull-socket. Three types: for outlet box, horizontal pipe fitting and vertical. Other new specialties from our latest catalog: Rectangular Q-D Angle Reflectors, Reflector Guards, Outlet Cover, Q-D Safety Ceiling Collars, Swivel Canopy, etc.

Keep this catalog (at your desk) for quick reference. Write for a copy if you haven't one.

QUADRANGLE MANUFACTURING CO.
30 S. Peoria Street Chicago, Illinois

QUAD
LIGHTING UNITS

Color Lighting Equipment For Interiors and Exteriors



Color Hoods
For lamps up to 60 watts.
(Full and half types.)



Laco Color Hoods
For lamps 75 w. to 500 w.
(Single or two tone effects.)



Color Plates
For flood lights, spots, etc.
(Also square and oblong in shape.)



Color Cylinders
For Street lighting units,
wall pockets and decorative
lighting effects.
(Made semi or full circular)

Headquarters for Color
Ask for Illustrated Pamphlet
"PROFITS FROM COLOR"

REYNOLDS
ELECTRIC COMPANY

MANUFACTURERS RECD. SIGN FLASHERS
TRAFFIC CONTROLS, SMALL MOTORS, ETC.
2623 W. Congress St. - Chicago, Ill.

and labor had been developed for the contractor and through him the wholesaler and the manufacturer. For every dollar received by the power company from a lighting unit on a street lighting system, there was represented \$6.14 in materials and labor to the contractor.

Other speakers were Leonard Hobbs, Edwin F. Guth Company; Morris Hixson, Edison Lamp Works; Victor Hartley, assistant managing director, California Electrical Bureau; and Clyde L. Chamblin, president, California Electrical Construction Company. The latter, speaking as a contractor, stressed the importance of the industry safeguarding the intensities which the industry is finding the American public demands against the ignorant attack of those who cheapen and cut down the installation.

* * *

Norristown Contractors to Advertise in 1931

Collective advertising in newspapers to run the entire year of 1931 has been contracted for by the Electrical Contractors' Association of Norristown, Pa. This advertising



Replace Storage Batteries With B-L Rectifiers

Modernize your storage battery equipment—replace them with B-L Rectifiers. They are dry . . . noiseless . . . and long-lived and can be used on school clocks, program ringing, time clocks, inter-communicating phones, etc.—wherever low-voltage direct current is necessary.

Try them on the next new job—also on replacement jobs. Cost is usually less and they work more efficiently. Available in many standard types and sizes. If the job needs special features, write us. Our Engineers will be glad to make recommendations. Complete literature sent on request.

The B-L Electric Mfg. Co.
ST. LOUIS, MO.

B-L
RECTIFIERS

For Efficiency

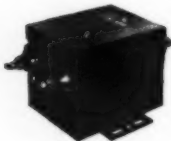
Standardize
with

Standard

The Most Complete Line of
Transformers Built



Current
Transformer



Potential
Transformer

Recommendations are made without charge.

Write Today for Complete Catalog

The Standard Transformer Co.
WARREN OHIO

STANDARD transformers are built for every purpose and are built to the most exacting requirements—thus assuring a dependable transformer for every job.

Consult us about your transformer problems, recommendations are made without charge.



BUILDS A MINIATURE GOLF COURSE FOR DEMONSTRATION:

—F. B. Green, electrical contractor of Sioux Falls, S. D., after lighting several putting courses in his own city, decided to lay out one of his own. Thus he was able to put into effect the latest ideas in illumination and garner revenue besides. This course is located in Watertown, S. D., as the Green Electric Co. operates over a large territory.

Beating Competition with Brains

Competition is tough in the electrical contracting business these days; and every day it gets worse. Successful contractors have found they can beat fly-by-night competition best by using their brains, and by educating their responsible employees. You can help your head men to keep abreast of the times and save you money by sending each his own copy of **ELECTRICAL CONTRACTING**.



FIND PROFIT IN REPAIRING ELECTRIC TOYS:—Willis Bros., Scranton, Penna., Art, left, and S. R. Willis, right. In addition to their contracting business this firm repairs electric trains at odd times at their shop.

will consist of a half-page every two weeks in each of the two papers.

One of the special features of the association's work has been a large bulletin board containing the names of the members, placed in the salesroom of the Philadelphia Electric Co., which is the local electric company.

Eleven out of twelve electrical contractors in Norristown are members of the association, and the meetings, which are held the first and third Thursday of every month, are well attended.

* * *

Philadelphia Lighting Campaign Under Way

The Electrical Association of Philadelphia, Pa., has been for some time planning an extensive better lighting campaign which is now in operation.

Centering the campaign around the men who sell lighting, the association has had three meetings on better lighting in which a growing interest has been shown. The first meeting drew an attendance of 85, the second 125 and at the third, 240 crowded into the hall.

In addition to helping men become better lighting salesmen and circularizing the prospects, the campaign offers still another service. Clubs and other organizations have been informed that the association will be glad to send a speaker to address them on the subject of lighting. In this way thousands of prospects for better home and industrial lighting will be created.



STRIP LIGHTS

for concealed indirect lighting

WHATEVER your need, we can fulfill your requirements—for both natural and color lighting effects—our strip lights are made in numerous styles and sizes, from a miniature strip for 10-watt lamps to an exceptionally large size for 150-watt lamps. They are compactly designed to fit limited space conditions, with screw base receptacles completely wired, and furnished with or without reflectors—in any length or curvature specified. Well made, practical, economical, they are easy to install, and satisfactory in service. Write for detailed information. Special designs are also made to order.

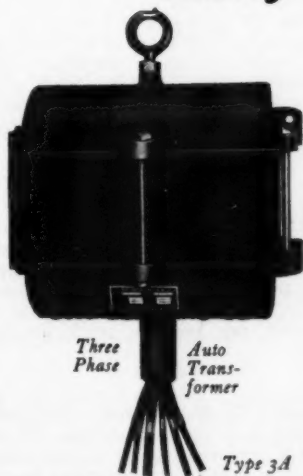
KLUEGL BROS

UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.

321 WEST 50th STREET
NEW YORK, N. Y.

SURGES Transformers

Easy to Install



We maintain a staff of transformer experts to help you. Consult them (without charge) anytime.

Your Customers Prefer Them for Their Economy of Operation

Surges Air-cooled Transformers are ideal for lighting installations. They meet the requirements of the National Board of Fire Underwriters for indoor installation and do not require fireproof vaults.

Every contractor should learn more about the opportunity SURGES AIR-COOLED TRANSFORMERS offer for increased sales to industrial customers. Practically every industrial plant and large building is a prospect. **WRITE TODAY FOR MORE INFORMATION.**

SURGES ELECTRIC COMPANY

MILWAUKEE, WIS.

Special Air-Cooled Transformers to fill specific needs. Send us your requirements.

the Spring's the thing!



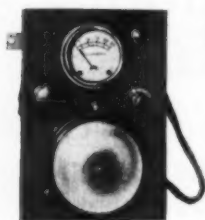
Paine Spring Toggles work in any position in attaching your electrical fixtures to any hollow wall, ceiling or floor. Electrical contractors everywhere are using Paine Toggles because the exclusively patented spring feature makes installation so easy and speeds up the work—saving time and money. Order today from your jobber or write us direct giving us his name.

The Paine Company

2949 Carroll Ave., Chicago, Ill.
79 Barclay Street, New York City

P A I N E S P R I N G T O G G L E S

Complete Protection



with SAFEGUARD ALARMS

Burglar
Fire
No Voltage
Brooder
Incubator

OPERATES on dry cells or highline current. Closed circuit principle rings if wires are cut, shorted or tampered with.

SIMPLE to install and economical to operate.

Clip and Mail Now

WM. E. PFEIFFER CO.
Safeguard Alarms
205 Pearl St.
Council Bluffs, Iowa

Gentlemen: Please send me Safeguard Alarms Booklet.

Name _____
Address _____
City _____ State _____



A ROLL O' TAPE

Electrical flashes gathered among the Big Wire-and-Pipe Men by

Coit A. (Duke) Smith
and Walter Holmes

Field Editors, ELECTRICAL CONTRACTING

GEORGE Reinagle, Reinagle Lighting Co., Buffalo, N. Y., combines big wiring jobs with expert lighting installations. He has a fondness for school buildings and has done a large number of them in Western New York. As an example of adequate lighting, he placed \$4,000 worth of fixtures in two school buildings.

H. F. HARTMAN, Scranton, Penna., has a condensed record of all job costs for a period of ten years. In checking over an estimate he compares the labor cost per dollar spent on materials and this usually gives him a clue as to whether he is out of line on his figures.

R. C. KING, Fairbury, Neb., is another contractor who has seen the wisdom of making salesmen out of mechanics. He pays his wiremen a flat salary, plus a commission on sales of extra wiring and material. Also they get 20 cents for each sale of a full carton of lamps, and when he puts on a convenience outlet campaign, his boys reaped a harvest at 50 cents for each outlet sold. King maintains two Chevrolet service trucks, stocked with material and the men sell wherever they go.

JOHAN W. Lippold, Lancaster, Pa., has two level fixture display rooms. Chandeliers are hung from the ceiling while the ceiling pieces are displayed on a false ceiling lower down so that the customer can see the stock at close range.

CHARLES M. Watson, of Philadelphia is so accommodating. He was doing a rewiring job for a lady and of course he helped her select the fixtures and arranged an appointment with a fixture house. Then she mentioned her desire for a vacuum cleaner system with a dirt container in the basement and pipes running to each room. She was highly pleased when he obligingly offered to install the job, as Mr. Watson's men she knew from experience were polite people who wiped their feet

"WHO'S MAKING MONEY—NOW?"



I AM!

SEE HOW
IN THE
W. B. B.

AND SO CAN
YOU IF YOU
DO LIKE I DO!

Alert Contractors
who apply business building

ideas and plans featured in each issue of Wiremold Business Builder are making money and getting plenty of jobs to do.

IF YOU ARE NOT READING
EVERY ISSUE YOU ARE LOSING
MONEY!

It's free to Contractors, you know.
Send your name for mailing list—
NOW!

WIREMOLD

WBB HEADQUARTERS
HARTFORD, CONNECTICUT

	ANTENNA ACCESSORIES	
	<p>RADIO DEALERS are every day jeopardizing sales by placing sets on approval without properly installing outside aerials. This can be overcome by specifying KNOX Insulators, Lightning Arresters and other antenna supplies. Receiving set manufacturers are now insisting on outside aerials in order to obtain best results.</p>	
	SOLD THROUGH JOBBER ONLY	
	<p>WRITE FOR CATALOG</p>	
	KNOX PORCELAIN CORPORATION	
	KNOXVILLE - TENNESSEE	



SHERMAN

Soldering

LUGS



THE sincerity of the SHERMAN Trade Policy makes the SHERMAN Line a permanently profitable one to handle.

Patented

With this standardized line of SHERMAN Soldering Lugs the contractor dealer is assured that he has the right lug for any order he is asked to fill. The SHERMAN Soldering Lug is approved by the Underwriters. Sizes up to 15/16" O. D. are made under the Sherman Patent. They are seamless, have better conductivity and solder cannot leak out. In sizes 15/16" O. D. and up, Sherman Soldering Lugs are made only of seamless copper tubing of correct gauge. SHERMAN Soldering Lugs can be made to most exacting specifications. SHERMAN service is complete and not confined to ready made requirements. SHERMAN has also provided an extensive standardized line of Heavy Duty Soldering Lugs. They are exactly correct and in active demand for central station equipment. Bulletins on request.

Sold Thru Jobbers

**H. B. SHERMAN
MFG. CO.
BATTLE CREEK
MICHIGAN**

before entering the house and she didn't have to count the silverware after they were gone. "And," promised the helpful Mr. Watson, "I'll stop and pick up the cleaner for you. They can bill it to me and I will bill it to you with the rest of the work so you won't have to think any more about it." The lady was so glad to have Mr. Watson handle those details for her . . . And Mr. Watson was glad, too, because he got a contractor's discount on \$2,600 worth of fixtures, \$175 for installation of the cleaner, and 33% off on a \$350 cleaner, on top of which he received the customer's thanks—that's salesmanship.

I ALWAYS thought "fishing" was one of the most disagreeable jobs in a contractor's life. But here is Al Strohmer, of the Pierson-Wilson Electric Co., Minneapolis, Minn., retiring from business so he can fish all the time. Al was given a big party by his associates at the home of Bill Collins. He is succeeded in the company by Art Stretch, a worthy successor to a man who will be missed.

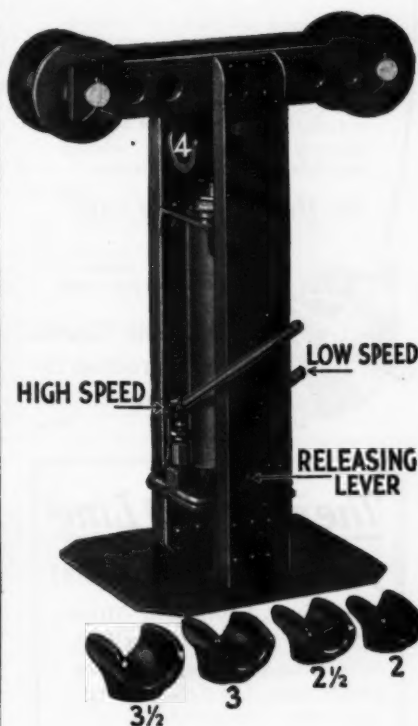
"MANY wiremen object to the use of labor-saving tools on the ground that they throw men out of work," says S. R. Willis, of Willis Bros., Scranton, Penna., "but it is only through the use of labor-saving tools that a contractor can provide work for his men. Without them the legitimate contractor could not get jobs in competition with the 'carpet bagger.'"

THE Lancaster County Contractors and Dealers Association, Lancaster, Pa., have a rather unusual financing plan that is said to work out very well. Dues are three cents per man hour of the contractors' men. Out of this large sum of money thus collected fees are paid to each member who attends the meetings so that the net cost is only nominal—for those who take an active interest in the association.

LEGITIMATE expansion is always good news. Demler and Morton, Tonawanda, N. Y., promoted themselves a nice new place of business without leaving the spot. They simply took in the quarters next door and remodeled the whole to suit their needs.

A PHILADELPHIA contractor had a half carload of pipe on the job when it disappeared as suddenly and mysteriously as a New York magistrate. The general contractor's men shrugged their shoulders in answer to his indignant howls. He was going to find that conduit or tear down the building looking for it, he declared. Acting on a hunch he drilled into the floor and found that his missing conduit had been used to reinforce concrete. The general contractor paid for the conduit and explained that his laborers didn't know the

No. 4 Chicago 30 Ton Hydraulic Bender Stands for Greater Efficiency!



Contractors all over the country are adopting the LIDSEEN 30 TON HYDRAULIC BENDER. There is no better proof than that of its efficiency and time saving value.

If you are not fully informed about the NO. 4 CHICAGO it will pay to investigate.

Write for catalog today.

Gustave Lidseen, Inc.

832-840 So. Central St.

Chicago,

Illinois

A BIG MONEY SAVER

Eliminates triple handling—unwinding—measuring and rewinding wire, thus saving time and money.

Manually operated—reels wire into neat coil, automatically counting and registering number of feet.

Strongly built of heavy selected materials so as to last a lifetime.

It Pays for Itself

Send for bulletin.
Write us or your jobber.

**Minneapolis Electric
and Construction Co.**

86 S. 12th St.
Minneapolis Minn.

The Jiffy Line

Jiffy Tools Reduce Costs!

Save Time, Labor and Money
with these valuable labor-saving items

We guarantee your satisfaction. Order any tool illustrated on the margin, on approval. If YOU are not satisfied return the material at our expense.

A Bulletin describing the complete line in detail will be mailed upon request. Fill in the coupon below or send in your order ON APPROVAL.

ESTABLISHED 1915

Paul W. Koch & Company
20 N. Wacker Drive, Chicago

- ☐ Send information regarding free trial.
☐ Send the "Jiffy Line" Bulletin.

Name.....
Firm.....
Street.....
Address.....
12-30



Solder Dipper



Nipple Chuck



Box Cutter

difference between that and steel rod. And the electrical contractor was evil minded enough to call the general contractor a thief . . . tsK . . . tsK . . . How could he say such things?

MASON Brown, of the Mason Brown Electric Co., Buffalo, N. Y., has never met John Kuhlemeyer, but I know John would be greatly pleased at the way Brown can step up to the blackboard and show the boys their overhead with a capital O. Brown is long on engineering and big stuff, but he is wise enough not to lose sight of the common sense fundamentals.

WEIDNER & Nuss, Reading, Pa., contractor-dealers, always do a good job of cleaning up after they finish a residential job—with a vacuum cleaner for which they are agents. Housewives who talk to salesmen through speaking tubes open wide the door for the man in overalls who comes in to tidy up after the job. Quite often they decide to buy one of the machines and the workman(?) of course takes their order.

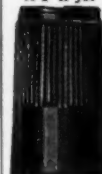
ELECTRICITY is being used as a silent watchman more than ever through the East. Private estates have flood lights mounted under the eaves to frighten burglars and in industrial work it is used to check workmen. A Philadelphia printing concern has just installed a light board in the office of the superintendent, which has a lamp for each machine in the plant. When the motor on the machine is shut off the lamp in the office goes out—so does the superintendent, to find what is wrong. No doubt there are many plants so equipped throughout the country, but many more will yet be installed by contractors who sell the idea of a complete electrical installation.

WILKES-BARRE, Pa., is said to be the second city in the United States to require licenses from master electricians and journeymen. This plan has been in operation over sixteen years. The board of examiners consists of the city electrical inspector, a master electrician and a journeyman. Journeymen are required to do practical bench work. Master electricians must lay out a job from a set of drawings. Men frequently fail to pass their first examination because of nervousness but succeed in later attempts. One man is said to have taken the test eleven times before being granted a license.

A CONTRACTOR once told me he had trouble getting his men to do repair work on packinghouse motors because of the smell. Later I met another contractor who did lots of stockyards repairs and asked him how about it. "Well," he said, "Don't mention my name and I'll tell you how we get around it. You know that skunk hides

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Patented

**WIRE
CONNECTORS**



MODERN times calls for modern methods—the safe JIFFY WIRE CONNECTORS are here to take the place of the old dangerous "solder-tape" method.

For reliability and efficiency you can find nothing to equal JIFFY WIRE CONNECTORS.

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HACKENSACK, N. J.

General Sales Office:

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Phone Canal 7533

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Manufacturers of

Electrical Signaling Systems

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Public Buildings

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Boston Chicago

Sales Offices:

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San Francisco Los Angeles

**PIONEER MANUFACTURERS OF
COMPLETE SIGNALING SYSTEMS**

are very much in demand as furs and the experienced skimmers always work to windward of the body. Of course we can't work on these motors outdoors but must fix them in our shop, so we put a fan at one side of the mechanic and while it doesn't eliminate the odors it helps a lot. Incidentally, this is one job you can be sure a man will do in a hurry."

MESSRS. Hammerman and Kimback, individual contractors of Scranton, Penna., find that two heads (and bank accounts) are better than one when going after the larger jobs. Either of them alone might have had trouble with the new First National Bank job of that city but working together they landed the contract and are, outsiders tell us, going to make money on it.

IN the classified section of the Philadelphia telephone book there are nine contractors who have night phones listed so they may be reached at all hours. Quaker Town isn't so slow when it comes to going after business.

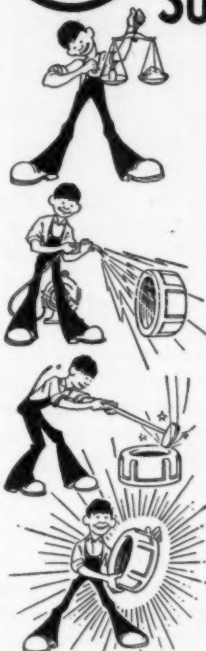
I ALWAYS get a happy feeling when I hear of a new source of revenue being developed for our friends the contractors. Up in Minneapolis six or seven of the boys have made a good thing out of these oil burner installations; I mean they have made it a specialty and are finding it mighty profitable. Incidentally, the Chief Inspector, Oscar Frykman, has aided them considerably by seeing that the law covering the quality of the wiring is strictly enforced.

IN this business there is nothing like studying a specialty before going into it deeply. Claude Dean, East Aurora, N. Y., contractor, saw a fine field in refrigeration installations. So he hied himself to Buffalo and has just completed the Frigidaire service course. As a result he is now the official service contractor in his city for that company.

O. J. MUELLER, Philadelphia motor specialist, likes to keep in touch with the latest developments in motors. For that reason he plans a tour through the middle west to visit a few motor factories. Most contractors could benefit by taking a trip of this kind.

ALEXANDER H. McDaniel, of Wilmington, Delaware, has got the kind of a job that every contractor dreams of—but seldom sees. It is the cozy little nest that the Du Pont family call home, 125 rooms, more or less. The radio installation alone costs over \$60,000 and what the entire job will be the contractor himself could not tell, even if he wished. Unfortunately he is not permitted to discuss the job for publication, but the rest of Wilmington is talking plenty. Even the hotel clerk was discussing it with a guest when I registered.

T&B TABOLITE SUPERIOR GALVANIZING



TABOLITE is an electro galvanizing plating process with an alloy of the best rust proofing agents known and depositing this alloy on the metal to be protected under high voltage.

The high voltage propels the plating particles with such force that they penetrate the porous surface of the metal, bonding the plating to it with equal density on inside surfaces as well as out and produces uniform plating.

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Tabolite is a clear, bright, silvery finish that will harmonize with any color.

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OAMCO**

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Chicago, Ill.

Manufacturers News

A department for the announcement of activities of manufacturers that are of interest to contractors, such as changes in executive personnel, branch offices, new products, etc.

Anaconda Makes District Office Changes

The Anaconda Wire & Cable Co. announces the following changes in district office personnel:

H. W. Simpson has resigned from the Chicago office of the company and J. P. Davis, formerly of the Pittsburgh office, has been transferred to the Chicago office. Mr. Davis will direct the western sales of Anaconda magnet wire from that office.

J. W. Mullally has been appointed district manager of the Pittsburgh office. He was formerly attached to the New York office.

C. A. Heiser has been appointed district manager in the Dallas office, and H. W. Thomasma has joined the New York office of Anaconda.

* * *

Trumbull Purchases Drendell Electric Company

The Trumbull Electric Mfg. Co., Plainville, Conn., has purchased the Drendell Electric Mfg. Co., San Francisco, Cal., manufacturers of panelboards and switchboards. The amalgamation of the organizations became effective November 1 and operate under the name of the Drendell-Trumbull Electric Mfg. Co.

* * *

C. W. Abbott Enters Advertising Business

Charles W. Abbott, formerly director of low tension engineering, General Cable Corporation, has recently joined the advertising firm of Moser & Cotins, Brown & Lyon, Inc. Mr. Abbott becomes vice-president and will devote much of his activity to selling the services of his new organization.

Mr. Abbott, who is probably best known as the originator of non-metallic sheathed cable, has been identified with the industry for more

than 20 years as an engineer with central stations; as an officer of manufacturing companies; as an inventor; as sales manager and buyer of advertising; as member of important successful committees of N.E.M.A., and other leading organizations.

Mr. Abbott will make his headquarters at the New York office of Moser & Cotins, Brown & Lyon, Inc., in the Graybar Building.

* * *

New Appointment for E. S. Conrad

E. S. Conrad, who recently was appointed general sales manager of the Diamond Electrical Manufacturing Co., with headquarters in Los Angeles, Calif., has been made vice-president in charge of operations of the Square D Company of Texas. The Square D Company of Texas is the new name of the Diamond Electrical Manufacturing Co. of Texas, and it will operate as a separate unit, handling the sale of Diamond E, Square D, and Industrial Controller material in the states of Texas, Louisiana, Oklahoma, Mississippi, Arkansas and part of Tennessee. The company has a manufacturing plant at Houston, Texas.

A. A. Schueler, formerly general sales manager of the Square D Company of Detroit, has been appointed to succeed Mr. Conrad as sales manager of the Diamond Electrical Manufacturing Co., with headquarters in Los Angeles.

* * *

New Westinghouse General Catalog

The Westinghouse General Catalog, 1931-1932, comprised of 1,352 pages presenting descriptions and illustrations of apparatus representative of the products manufactured and sold by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., has been announced recently by that company.

This catalog presents complete listings of distribution apparatus, switchgear apparatus (except large oil circuit-breakers and power switchboards), lighting equipment, domestic appliances, gearing apparatus, and current-collecting devices; condensed listings of industrial motors and control apparatus, industrial heating apparatus, and commercial cooking equipment; and descriptions of other products.

An interesting feature of the new catalog is the "Instant Index," which appears on a two-page spread, printed on a heavy blue stock, in the center of the book. In this index the 24 groups of equipment described in the catalog are listed in large bold type, and from the name of each group an arrow points to the index notch of the section of the book covering that equipment. Because all the groups thus listed can be noted at a glance, finding the information for which one is looking is greatly facilitated.

* * *

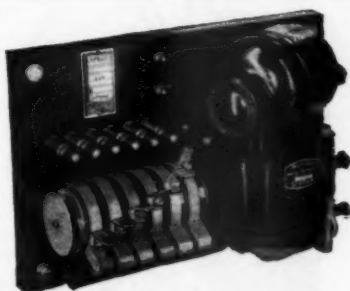
A Guide to Productive Lighting for Industry

The Benjamin Electric Mfg. Co., Des Plaines, Ill., has published a revised and enlarged edition of the hand-book, "A Guide to Productive Lighting for Industry."

The subject of the installation of better lighting systems in industrial plants is thoroughly covered. Beginning with the planning of the system from the standpoint of the lighting engineer, the book goes on to tell of the benefits to be derived through the cutting down of errors and spoilage; lessening of accident; improved morale; greater amount of work turned out; putting to profitable use dead floor space, and many other advantages of better lighting.

There are floor plans with typical installations showing the proper mounting heights and spacing of light units. Also information on the use of the

New Electrical Products



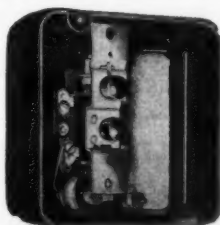
Monitor Controller Co., Baltimore, Md., announces a control device designed to meeting timing requirements of any electrically controlled work cycle called "Monitor Work-cycle Timer." The current-carrying switches in a timer unit are all electrically connected on pivoted side. Each individual switch consists of a rotatable disk carrying an adjustable contact point and a post fixed on panel and connected directly to circuit to be controlled with as many little switches as there are circuits in sequence. Rotatable disks are mounted loosely on a sleeve which is carried on a revolving hollow shaft. Each disk is between two rotating disks keyed to shaft, disks being equipped with carbon blocks. Rotating hollow shaft is driven by an electric motor with a clutch rod through the center.



Borden Electric Co., Newark, N. J., announces a "direct reading" groundometer designed for measuring resistance to flow of current from a metal electrode into surrounding earth. Type E meter shown above is housed in oak case with leather carrying handle. Dimensions of meter are 9 $\frac{1}{2}$ x 4 $\frac{1}{4}$ x 6 $\frac{1}{2}$ in. overall and weighs 7 lbs. It can be furnished complete with test rods, test leads and reels and leather carrying case with shoulder strap. It has a Bakelite face plate and nickel-steel scale plates; binding posts are nicked brass designed for use with either plug, flat clip or spring clip terminals; nickel-plated case and ring. It also has a single dry cell battery of ordinary type.



A hand operated a.c. starter with overload breakers is announced by the Allen-Bradley Co., Milwaukee. This unit handles all motors up to 3 h.p., 110 volt, 5 h.p. 220 volts, 7 $\frac{1}{2}$ h.p., 440-550 volts. The overload breakers operate on soldered ratchet principle; the starting lever has a safety interlock preventing removing of cover unless lever is in "off" position and switch can be padlocked in open position.



Cutler-Hammer, Inc., Milwaukee, Wis., announces a resistor type starter for fractional h.p., d.c. and single phase, a.c. motors rated at $\frac{1}{4}$ h.p., 115 volts, d.c., and $\frac{1}{4}$ h.p., 110 or 220 volts, a.c. The starter is pushbutton operated and provides thermal overload protection to motor. Motor is disconnected only when in danger of burnout. Enclosing case is standard double wiring box easily mounted on machine, wall or any other convenient point. Starters can also be obtained without enclosing case for building into pedestal or other part of machine.



An intermediate base keyless candle socket, with detachable hickey and $\frac{1}{4}$ in. nipple, known as P&S 6004, is announced by Pass & Seymour, Inc., Syracuse, N. Y. The hickey is held to socket body by one holding screw, with terminals on side of socket body. Diameter of socket is $\frac{11}{16}$ in., overall length being 2 $\frac{1}{2}$ in. An intermediate base brass shell angle socket, having a $\frac{1}{4}$ in. cap, known as P&S 6483, is also announced.

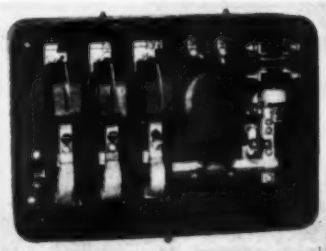


The "Ideal" type LO $\frac{1}{4}$ -in. standard duty drill has been added to the line of the Schauer Machine Co., Cincinnati, Ohio. This tool measures 10 $\frac{1}{2}$ in. overall and weighs 5 $\frac{1}{2}$ lbs., it has a universal motor; armature shaft and chuck shaft mounted on two sealed type ball bearings; a removable plate on the housing with a removable plate on handle permitting inspection of switch connections; trigger switch mounted in a grip type handle. Cable is protected by clamp and spring, and regular equipment includes a three-jaw key chuck.



The Trumbull Electric Mfg. Co., Plainville, Conn., has placed on the market a Safe-ConverTi-Fuse panelboard with a narrow and shallow cabinet. Some of the features of this panelboard are all copper parts except main busbars and main lugs are cadmium plated; protective steel cover over main lug section; bakelite caps and sections; double knife blade contacts at end; box ends removable, being held in place by screws; all parts removable from front; double-break circuits from 0 to 600 amp., either 250 volt or 600 volt for d.c. or a.c.; individual busbar supports with all sections have moulded barriers.

New Electrical Products



The General Electric Co., Schenectady, N. Y., announces CR-2811 magnetic switch for use on a.c. or d.c. circuits. This device consists of a two or three-pole a.c. standard contactor with latching mechanism, mounted on a base, with or without enclosing case. The main contacts are silver-faced permitting switches to remain closed for long periods of time without overheating.



Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., announces a tip-over marker light cone with flush type disconnecting pothead for airport night lighting. The body of the cone is 26 ga. lead-crated steel with four vanes attached to upper part of body. Pipe unit for attaching marker light is welded to small cup which fits over top of cone with a similar cup under top of cone which slips over lower extension of pipe nipple. Lower edge of cone has a bead rolled on outside. Disconnecting pothead has a cast-iron body, hot galvanized inside and out with cast-steel trap door attached. A porcelain pothead is mounted in unit held in place with four clips. Tip-over marker light cone is adaptable to all types of marker lights and can be used for series or multiple circuits, with or without disconnect.



Reflector & Illuminating Co., Chicago, announces a non-ventilated floodlight for exterior use. The housing of unit is composed of aluminum with bronze fittings. It has a universal adjustable base. Standard 300-500 watt PS lamps are used and unit has a silver-plated glass reflector of deep parabolical design giving a beam control from 6 to 25 deg. with plain cover glass. This may be increased to 40 deg. with use of diffusing cover glass.



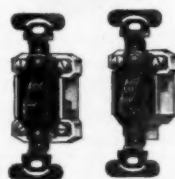
The Monitor ironclad push button switch for a.c. and d.c. circuits has been designed by Monitor Controller Co., Baltimore. This switch consists of a base carrying the wiring and fixed contacts and a cover carrying the buttons. It also has quick-action inching and flexible contacts with stop button located at top and start button at bottom. Conduit connections can be made from top, bottom or either side. Dimensions of switch are overall height 4 3/4 in., width 2 1/8 in. and depth from mount 2 3/8 in.



Quadrangle Mfg. Co., Chicago, announces a rectangular angle reflector in porcelain enamel with cadmium plated socket fitting in 50 to 500 watt sizes. The open side of the reflector is rectangular providing a straight line cut-off of light. Horizontal, vertical and outlet box fittings are provided which are interchangeable, the horizontal type being reversible.



Multi Electrical Mfg. Co., Chicago, announces No. 315 shadowless long beam projector, which is weatherproof, and easily adjusted to flood or spot-light dimensions. It is complete in all sizes from 200 to 1500 watt.



Two flush tumbler switches, Nos. 1301 and 1303, have been announced by the Arrow Electric Division of The Arrow-Hart & Hegeman Electric Co., Hartford, Conn. No. 1301 is single pole and No. 1303 three-way. Each unit has a compact trigger switch mechanism. Units also have roller action of mechanism with wiping contact and heavier operating lever.

MARTIN

Portable
Vise Stand
and
Pipe Bender



Made in
Two Sizes
—small stand
with chain vise
5 in. cap.; with
hinged vise 2 1/2
in. capacity.
—Large stand
with chain vise
6 in. cap.; with
hinged vise 4 1/2
in. capacity.

Do away with that
make-shift bench
Garry the
MARTIN with you
anywhere... A
vise time saver for
cutting and thread-
ing pipe or conduit
up to 2 1/2 in. field on
approval. Write
today.



H. P. MARTIN & SONS
Owensboro, Ky.

E-Z WIRE STRIPPER

A HANDY TOOL



This inexpensive tool
strips wire of 10 to 20
gauge 20 times faster
than usual methods.

A MONEY BACK
GUARANTEE with
every E-Z Wire Strip-
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now.

\$5.00 LIST

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A deep groove on the inside of the
band removes pressure where pipe is
shortening and thickening; allows it
to flow outward instead of pushing it
inward. Compare its work with work
done by any other hickey. Get a
set. Your money back if you're dis-
satisfied for any reason. Thousands
sold without complaint. Electricians
swear by it.

Made in 3/4",
1/2", and 1-in.
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Ask Your Jobber

Jobbers everywhere have Silvey Hickeys in stock.
If yours will not supply you, we will ship direct.

SILVEY PIPE BENDER COMPANY
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Keep Up-to-Date

By reading these pages you will
acquaint yourself with what is
newest and best in electrical
supplies and equipment.

When communicating with an
advertiser mention

Electrical Contracting



**HEADS ELECTRICAL DIVISION
OF YORK CORRUGATING:**—Morgan J. Lewis, former president of the M. J. Lewis Products Co., Philadelphia, has joined the York Corrugating Co., York, Pa., and is in charge of the electrical division.

foot-candle meter, wiring data, illumination calculation tables, etc.

A number of typical illustrations showing before and after pictures where installations have been made with Benjamin lighting equipment, and the complete line of Benjamin reflectors and other lighting fixtures are described. It is a most complete summing up of the advantages of better lighting and the way to get it.

* * *

Indiana Rubber Transfers Kirkland

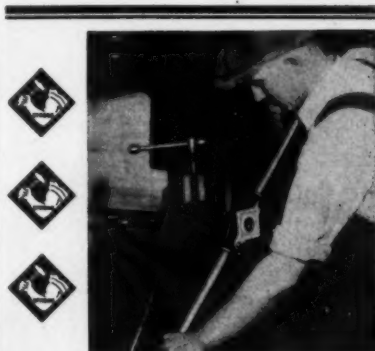
J. G. Searls, general sales manager, Indiana Rubber & Insulated Wire Co., Jonesboro, Ind., manufacturers of Paranite, announces that James L. Kirkland will travel out of the Chicago office, of which Frank Dolan is manager. Mr. Kirkland formerly represented Indiana Rubber at Louisville, which territory will now be handled by James Seiberling.

* * *

Classified Advertising

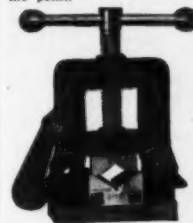
For Sale: Electrical merchandising shop, in one of the most progressive cities in Michigan. Have franchise in western Michigan for General Electric radios, refrigerators and Hotpoint ranges. Box No. 1230, Electrical Contracting, 520 No. Michigan Ave., Chicago, Ill.

Position Wanted: Graduate electrical engineer who has been in business for himself and has been in sales end for last 25 years wishes to represent manufacturer of good product used by this trade in Detroit and throughout Michigan. Address Box 1231, Electrical Contracting, 520 No. Michigan Ave., Chicago.



In every detail—
Built to Give Double Service

ARMSTRONG Bros. Pipe Vises are built to give double service. The bodies are of Certified Malleable Iron. The jaws are carefully milled from Tool Steel, hardened, tempered and tested. The hooks are of tough, unbreakable drop forged steel. The special steel screws have a special double-life thread and are hardened at the point.



In design they combine automatic-locking, quick action, with convenient weight and extra strength. They are from the line of Better Pipe Tools, the tools distinguished by the Arm-and-Hammer Trade Mark.

Armstrong Bros.
Tool Co.

"The Tool Holder People"
341 N. Francisco Ave.
Chicago, U. S. A.

Write for Cat. P-10

ARMSTRONG BROS.

Price is no
Longer a Problem



JACKSON
High Quality, Low Cost,
Reflectors Keep You Out
of Competition

In submitting your next bid
quote on JACKSON REFLEC-
TORS. You will be sure of
getting the job and making a
profit.

Clip and Mail Today

JACKSON ELECTRICAL CO.
910 W. Van Buren St., Chicago

Please send me bulletin quoting your LOW
prices on standard quality reflectors.

Name.....

Address.....

City..... State.....



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Madison Avenue"**
(Apartment House)
New York, N. Y.

Mansard Realty Co. *Owners*
Rosario Candela *Architect*
Kidansky & Levy
General Contractors
Regent Electric Co.
Electrical Contractors

*An up-to-date apartment house
with up-to-date*

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Henry D. Sears

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80 Boylston St. Boston, Mass.

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This Newly Perfected Indirect Lighting Unit



*represents highest type of
PERMAFLECTOR efficiency
at very low cost for fixtures*

The same efficient, properly distributed lighting of our DeLuxe type A Luminaire—for office and commercial lighting—is now available in Pittsburgh Indirect Luminaires B-2 (using Permalector B-206) and B-5, (using Permalector B-501).

The cost is much lower, but the quality of illumination is unchanged. Type B. Luminaires have spun copper bowls, suspended from spun copper husk enclosing socket by means of detachable steel arms. Spun copper canopy—stem of brass tubing—chain of steel. All external parts finished in either dark Monumental Bronze or in Pewter:

Write for complete particulars regarding this lower priced fixture with its standard PERMAFLECTOR units insuring broad, smooth distribution of light over the ceiling.

			List
	Diam.	Depth	Price
B-2, 200 watt,	11 $\frac{1}{4}$ "	5 $\frac{3}{8}$ "	\$11.00
B-5, 300-500, watt	13 $\frac{3}{4}$ "	7"	14.50
		F.O.B. Irwin, Pa.	

Pittsburgh Reflector Co.,
304 Ross St., Pittsburgh, Pa.

Permalector

LIGHTING

The Silvered Glass Reflectors with the PERMANENT Reflecting Surface

A Complete Handbook of Electricity and Standard Methods of Industrial Wiring--

Here is a book that offers the practical worker a thorough training in electrical wiring for every industrial application. In addition to presenting standard, economical and efficient methods for doing every type of wiring, it also offers a thorough grounding in electrical theory; in the action and application of electrical equipment; the principles of lighting and power circuits; together with much other information needed for the effective handling of this work.

Industrial Electricity and Wiring

by JAMES A. MOYER

Director of University Extension, Massachusetts Department of Education

and JOHN F. WOSTREL

Instructor in Electrical Engineering, and Supervisor in Charge of Industrial Subjects, Division of University Extension, Massachusetts Department of Education.

469 pages, 5 1-2 x 8, 281 illustrations and diagrams—Price \$2.75 postpaid

This is a comprehensive exposition of the entire field of practical electrical wiring. It covers everything from fundamentals of electrical theory right down to the most effective methods for handling the newest electrical equipment.

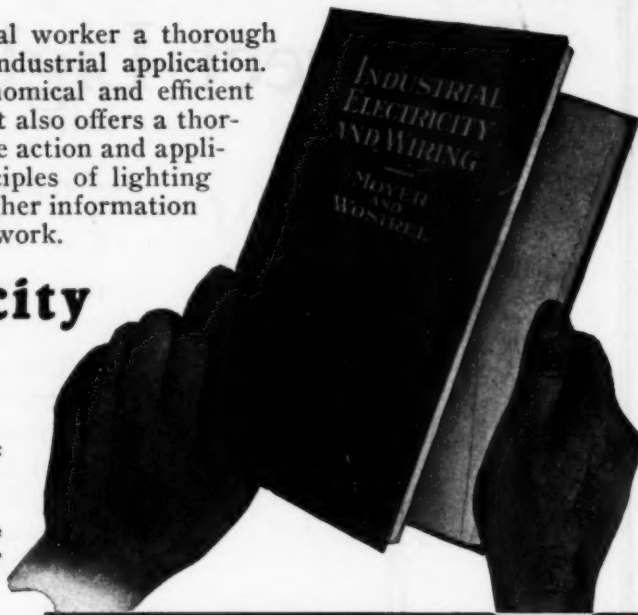
The treatment is simple, progressive and thorough—aimed so that the electrician can acquire the most helpful combination of the fundamentals underlying his problems and an ability to work most economically and efficiently through a knowledge of standard procedure.

Some of the many topics covered

In the first and second chapters you will find a study of effects produced by electric currents, units of measurement, and practical applications. Following this, the book gives you detailed instructions on wiring conduits and moldings; wiring old buildings; wiring for industrial and household appliances; wiring generators, motors and transformers. Then you are given details on industrial and residential lighting, theater services, out-of-door uses, distribution systems, circuit control apparatus and many other applications.

Chapter Summary

1. Fundamental Theory and Units
 2. Splicing and Soldering Wires
 3. Calculation of Wiring Systems
 4. Wiring Methods and Types
 5. Details of Wiring in Conduits and Moldings
 6. Wiring Old Buildings and Unit Costs
 7. Industrial and House Appliances
 8. Electrical Generators and Generator Wiring
 9. Industrial Electric Motors and Motor Wiring
 10. Transformers and Connections
 11. Industrial Wiring
 12. Wiring for Theater Services
 13. Residential Lighting Equipment
 14. Estimating Industrial and House Wiring
 15. Out-door Wiring
 16. Distribution System
 17. Circuit Control Apparatus
 18. Grounding of Systems and Equipment
 19. Wiring for Miscellaneous Services
- Appendix—Index—Reference to National Electrical Code.



281 charts, diagrams and drawings

Everything is clearly illustrated by diagrams, charts and tables. The practice described throughout the book is based on the 1929 National Electrical Code. In the chapters devoted to practical applications of wiring for electric light and power, material on the planning of circuits and estimating costs is included. A glance over the chapter summary will give you some idea of the wide compass of this work—but you should see this book to really grasp its scope. Take advantage of this free examination offer! Send for it to-day!

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